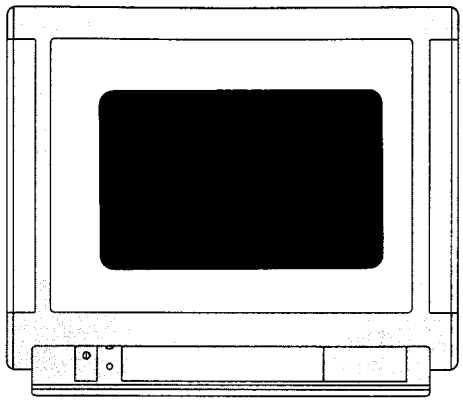
Service Manual



Colour TV

Models

CT-25AV1BD CT-28AV1BD
CT-25AV1BDS CT-28AV1BDS
CT-25AV1LD CT-28AV1LD

SPECIFICATIONS

Reception System	CCIR-I PAL		
Reception Frequency	UHF 470MHz~862MHz	(all models)	
	VHF 47~170MHz (VB1), 170~448MHz (VB2)		(LD models only)
Mains Input	AC 230V 50Hz		
Power Consumption	110W	(25AV1BD/LD)	
	128W	(25AV1BDS)	
	112W	(28AV1BD/LD)	
	130W	(28AV1BDS)	
Aerial Input	75 ohm		
Intermediate Frequency	Video:	39.5MHz	
	Sound:	33.5MHz	
Audio Output	2 x 12W (L/R) + 12W (Centre) + 2 x 6W (Rear)		(25AV1 models)
(music power)	2 x 12W (L/R) + 15W (Woofer) + 12W (Centre) + 2 x 6W (Rear)		(28AV1 models)
Speakers	2 x (10cm + 4cm) (L/R) + 12x8cm (Centre) + 2 x 10cm (Rear)		(25AV1 models)
	2 x (10cm + 4cm) (L/R) + 10cm (Woofer) + 12x8cm (Centre) + 2 x 10cm (Rear)		(28AV1 models)
Chassis	EE3		
Picture Tube	A59EAK71X11	59cm(V)/25", 110°	(25AV1 models)
	A66EGW83X101	66cm(V)/28", 110°	(28AV1 models)
Cabinet dimensions	604mm x 473mm x 500mm		(25AV1 models)
(approx. W x D x H)	671mm x 495mm x 548mm		(28AV1 models)
Weight	28Kg	(25AV1 models)	
(approx. Not incl. stand or rear speakers)	34Kg	(28AV1 models)	

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1 GENERAL NOTES

1.1 SAFETY PRECAUTIONS

1.1.1 General Warnings

1. Observe any cautions and safety related notes located inside the receiver cabinet and on the receiver chassis.
2. An isolation transformer should be used between the television receiver and the AC power supply point before any test or servicing is performed on a LIVE chassis television receiver.
3. Operation of these receivers outside the cabinet or with the back cover removed involves a shock hazard from the receiver power supplies. Work on the receiver should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment.
4. Do not install, remove or handle the picture tube in way unless shatterproof goggles are worn. People not so equipped should be kept away while the picture tube is being handled. Keep the picture tube away from the body while handling.
5. When service is required, observe the original lead dressing. Extra precaution should be given to assure correct lead dressing in the high voltage area. Where a short-circuit has occurred, replace those components that indicate evidence of overheating.

1.1.2 X-RAY Warning

Under fault conditions the CRT can generate X-rays. The use of a lead apron is recommended if available.

When replacing the CRT only use the designated replacement part as it is a critical component with regard to X-rays. No high-voltage adjustments are provided.

1.1.3 Leakage Current Check

Before returning the receiver to the customer it is recommended that the leakage current be measured according to the following method:

With the AC plug removed from the AC source, place a jumper across the live and neutral pins. Turn the receiver AC switch on. Using an OHMMETER, connect one lead to the shorted AC plug and touch the other lead to each exposed metal part (antennas, screw heads, etc.) in turn, particularly any exposed metal part having a return path to the chassis. Any resistance below a value of 1 MEG OHM indicates an abnormality which requires corrective action.

1.2 CONTROLS AND CONNECTORS

1.2.1 Front Panel

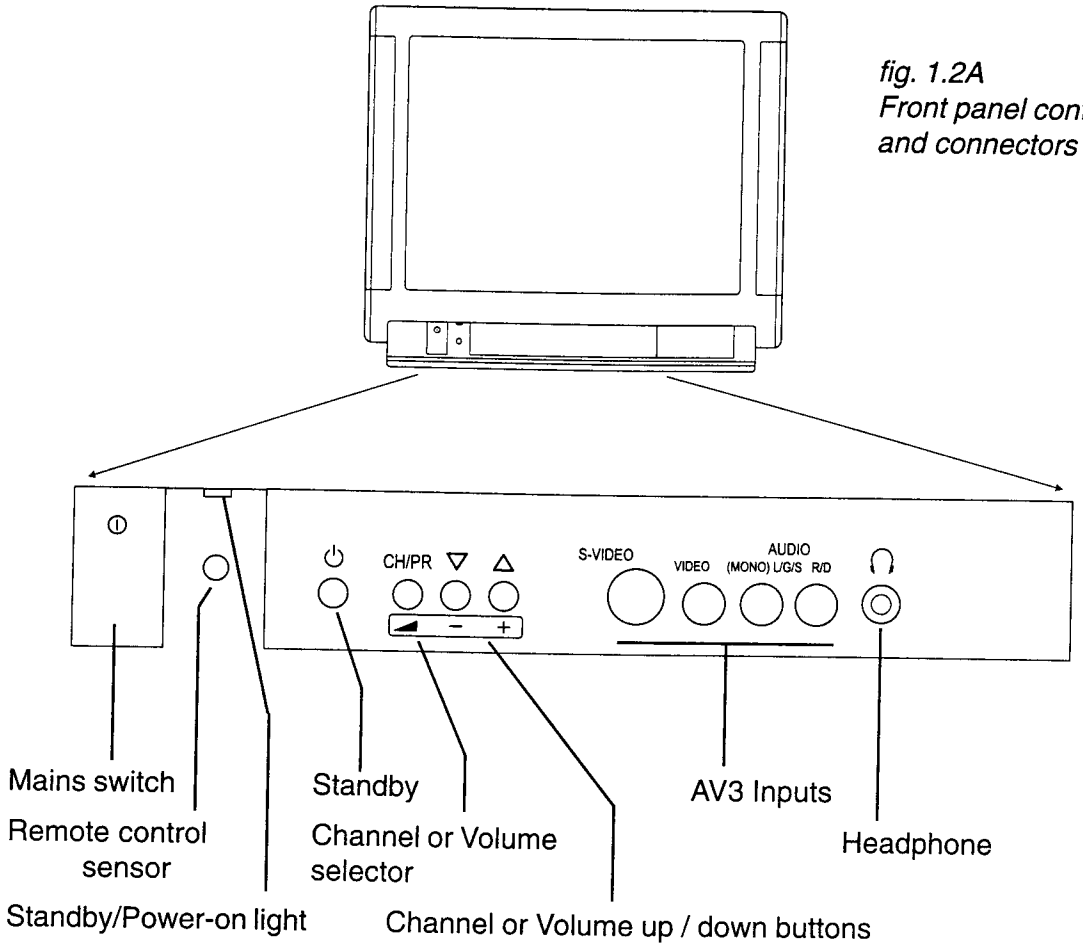


fig. 1.2A
Front panel controls and connectors

1.2.2 Rear Panel Connectors

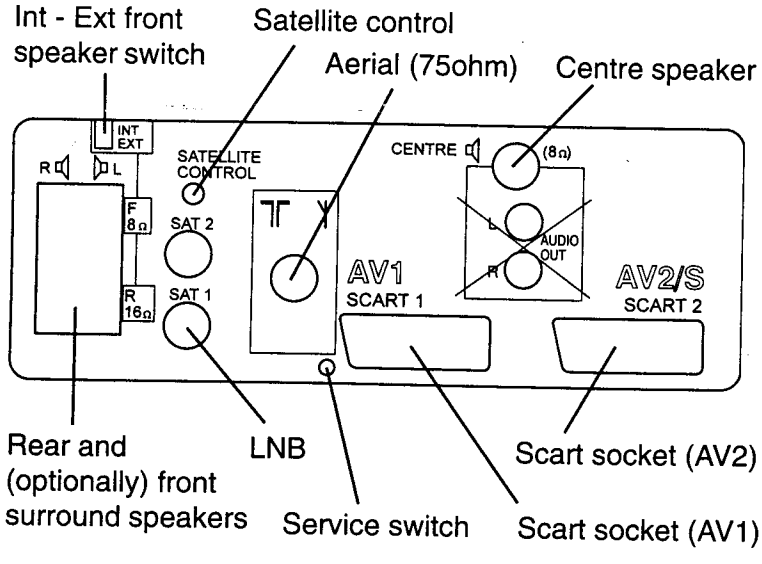
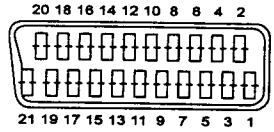


fig. 1.2B Rear panel connectors



Pin	AV1	AV2
1	Audio out – R	Audio out – R
2	Audio in – R	Audio in – R
3	Audio out – L	Audio out – L
4	Audio earth	Audio earth
5	Blue earth	Earth
6	Audio in – L	Audio in – L
7	Blue in	Not connected
8	Function switch	Function switch
9	Green earth	Earth
10	Not connected	Not connected
11	Green in	Not connected
12	Not connected	Not connected
13	Red earth	Chroma earth
14	Blanking earth	Earth
15	Red in	Chroma in
16	RGB blanking	Not connected
17	Video out earth	Video out earth
18	Video in earth	Y earth
19	Video out	Video out
20	Video in	Y in
21	Socket earth	Socket earth

fig. 1.2C Scart socket pin details

1.3 REQUIRED EQUIPMENT

1.3.1 Measuring equipment

- Oscilloscope
- Signal generator
- DC milliammeter
- DC voltmeter

1.3.2 Test signals

- PAL Crosshatch
- PAL Monoscope (or a VCR playing a monoscope alignment tape)
- PAL Colour-bar with the specification as in figure 1.3A below:

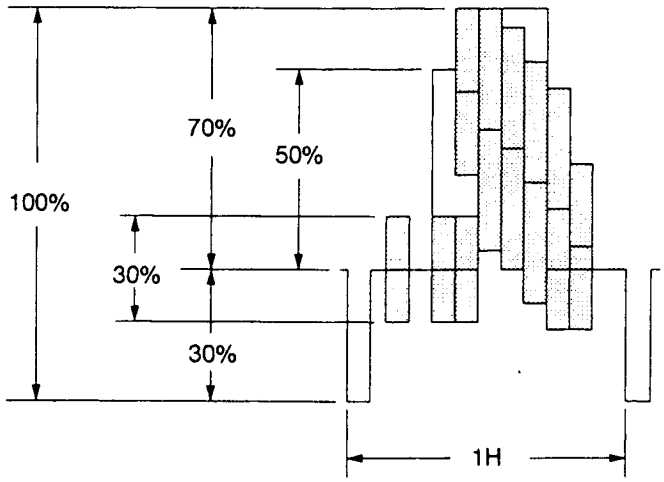


fig. 1.3A Split-field colour bars (with 100% window)

1.4 CONNECTING LEADS

1.4.1 Identification

Connecting leads are identified by the colours of their wires according to figure 1.4A below:

Colour	Code
BLACK	A
BROWN	B
RED	C
ORANGE	D
YELLOW	E
GREEN	not used (earth)
BLUE	G
VIOLET	H
GREY	J
WHITE	K
PINK	L

Example:

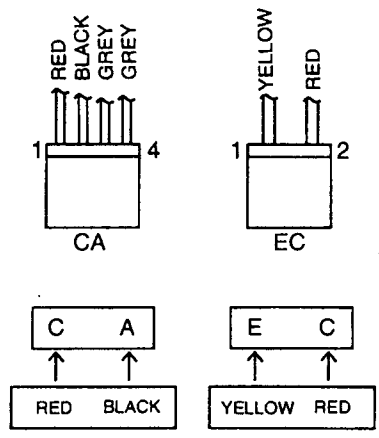


fig. 1.4A Connecting lead identification chart

1.4.2 Lead dressing

Leads must be dressed as shown in table 1.4B and the diagram (fig. 1.4C) below. The leads are routed or clamped so that they do not come close to any heat generating or high-tension parts.

The anode lead wire is routed such that no tension is applied to the anode cap. If the mounting angle of the anode cap and the route of the anode lead wires are changed, return them to the initial angle and route.

CLAMP	25/28 AV1 BD/LD	25/28 AV1BDS
1	KB, KK	KB, KK
2	DA, DE, HJ	DA, DE, HJ
3	HH, HJ	HH, HJ
4	DD, DE, DS	DD, DE, DS
5	DD	CA, DD, DG, GB
6	GA, GB, KD, DA (loop wires 1 + 2)	GA, GB, KD, DA (loop wires 1 + 2)
7	DY	DY
8	LB, SA (25AV1 only), BA (looped)	LB, SA (25AV1 only), BA (looped)
9	GA, GB, KD	GA, GB, KD
10	LB (looped), SB, Focus	LB (looped), SB, Focus
11	Anode lead	Anode lead
12	BA, DA (wires 1 + 2 only)	BA, DA (wires 1 + 2 only)

table 1.4B Lead-dressing table.

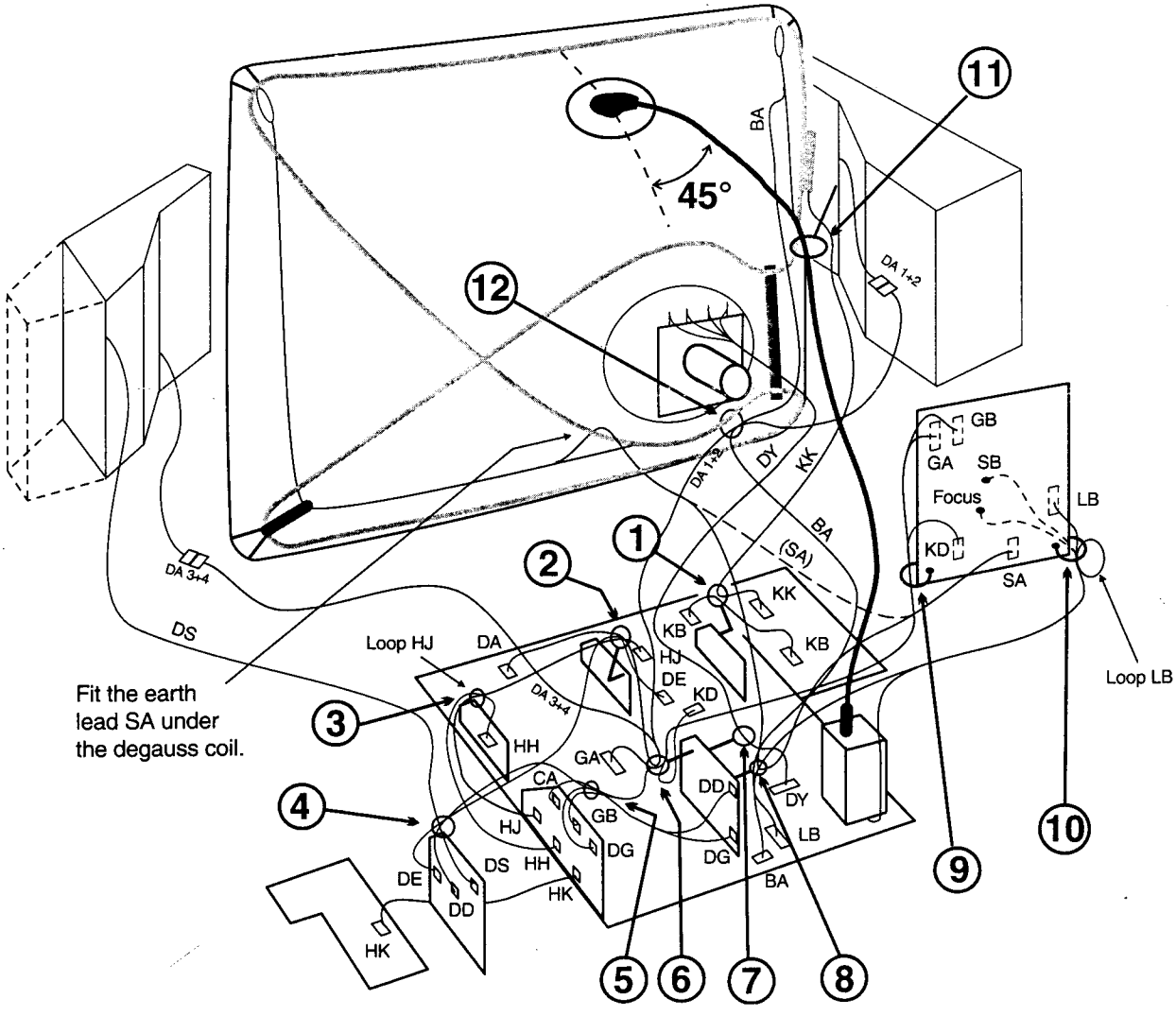


fig. 1.4C Lead-dressing diagram.

2 SERVICE ADJUSTMENT PROCEDURES

2.1 INTRODUCTION

Most service adjustments to these models are made using the remote control (figure 2.1A) with the TV in service mode. The adjustment data is stored in an EEPROM.

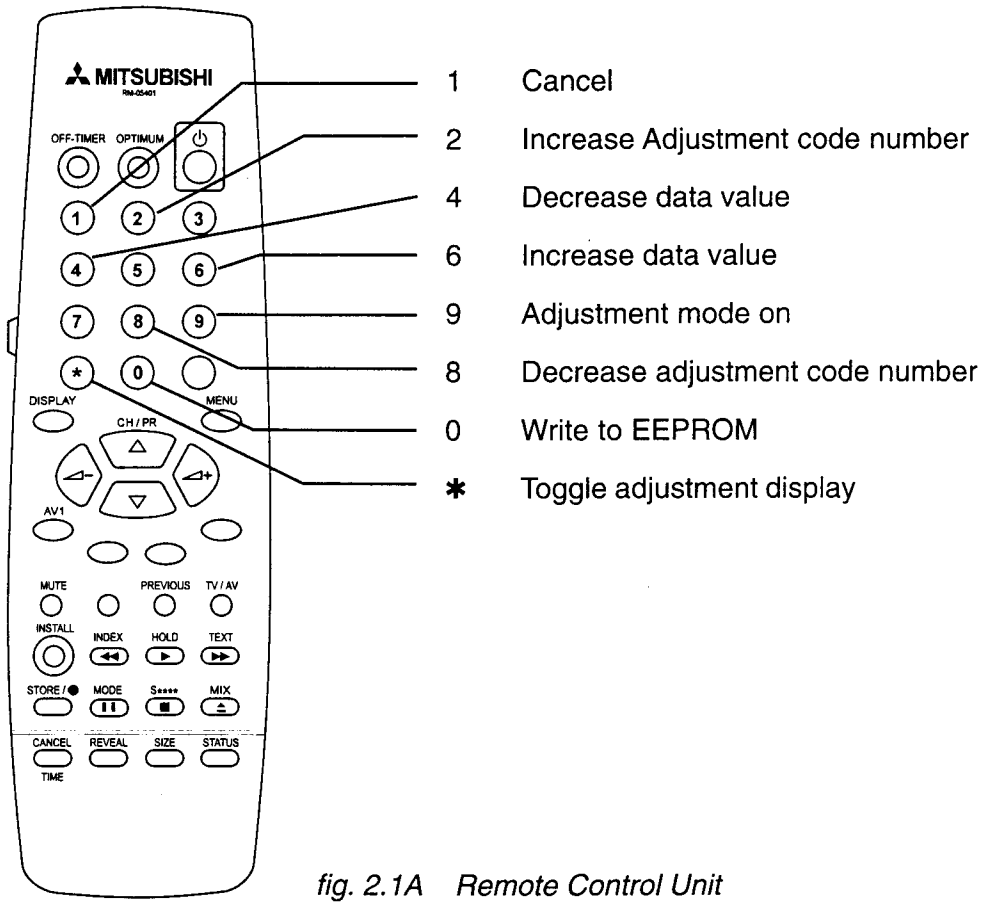


fig. 2.1A Remote Control Unit

2.1.1 Basic adjustment procedure

1. Turn the power on. With a small screwdriver, press the Service switch (S701, next to the aerial socket) and then button "9" within 5 seconds to enter service mode.
2. Press the "*" button to select either the VCJ or OPTION adjustment display (figs. 2.1B and C).

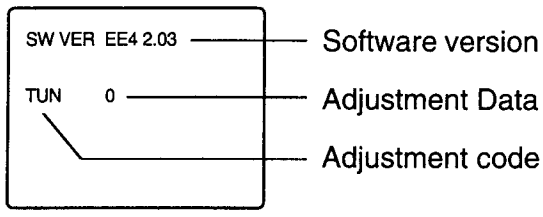


fig. 2.1B Options adjustment display

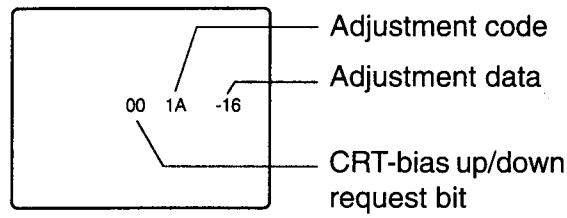


fig. 2.1C VCJ adjustment display

3. Press buttons "2" or "8" to increase or decrease the adjustment code number.
4. Press buttons "6" or "4" to increase or decrease the data value.
5. After completing your adjustments, press button "0" to write the adjustment data to the EEPROM.

   To cancel a change, press button "1" (or the Standby button) before writing the adjustment to the EEPROM. All data adjusted since the last EEPROM write will be reset.

2.2 INITIALISING THE EEPROM

If you have replaced the EEPROM (IC702) or if for any reason the adjustment data has become corrupted it will be necessary to initialise the EEPROM.

2.2.1 Initialising the EEPROM

1. If necessary, switch off by the Main switch.
2. Hold in the service switch (S701, next to the aerial socket) while switching on by the Main switch.
3. Release the service switch after 3 seconds.
4. Switch off by the Main switch.
   The EEPROM data values have now all been reset to their initial default values as shown in table 2.2C.
5. Switch on by the Main switch. Press the Service switch and then button "9" within 5 seconds to enter service mode.
6. Press the "✱" button to select the OPTIONS adjustment display.
7. Press buttons "2" or "8" on the remote control to select the adjustment code.
8. Adjust the data value for each code using buttons "2" or "4" on the remote control according to table 2.2A below:

   (Other adjustment codes will be displayed but need not be changed on these models.)

CODE:	TUN	SAT	AUD	ATS	STD	SYS	AVI	SPK	ABG	AI	AL	ADK	MNP	FFT	VOL	HYP	SCP	FMP
25/28AV1BD	0	0	10	1	1	2	2	0	02	02	00	15	70	1	74	1	20	23
25/28AV1BDS	0	1	10	1	1	2	2	0	02	02	00	15	70	1	74	1	20	23
25/28AV1LD	1	0	10	1	1	2	2	0	02	02	00	15	70	1	74	1	20	23

table 2.2A Data values for the OPTIONS adjustments.

9. Press the "0" button to write the changes to the EEPROM.
10. Press the "✱" button to select the VCJ adjustment display.
11. Press buttons "2" or "8" on the remote control to select the adjustment c ode.
12. Adjust the data value of each code using buttons "2" or "4" on the remote control according to table 2.2B below:

    (Other adjustment codes will be displayed but need not be changed on these models.)

CODE:	07	11	12	19	1B	1C
25AV1BD/BDS/LD	-7	001	111	-3	-11	-2
28AV1BD/BDS/LD	-7	001	111	-2	-9	-3

table 2.2B Data values for the VCJ adjustments.

13. Press the "0" button to write the changes to the EEPROM.

2.2.2 EEPROM Default data values.

These values are adequate to allow the set to be adjusted.

VCJ data values		
CODE	**FUNCTION**	**DATA VALUE**
00	V-AMP	-16
01	V-CORRECT	-31
02	P-AMP	+05
03	TILT	-12
04	V-LIN	+23
05	C-CORRECT	-09
06	H-AMP	-22
07	16x9 - SW.RGB-MATRIX	-07
08	V-SHIFT	+02
09	H-PHASE	+10
0A	B-DRIVE	+01
0B	G-DRIVE	+01
0C	R-DRIVE	+01
0D	CONTRAST	+14
0E	BRIGHT	+01
0F	COLOUR-SAT	+10
10	NTSC-TINT	00
11	SHARP	111
12	PAL-LUMA-DELAY	111
13	SECAM-LUMA-DELAY	111
14	V-AMP-60	00
15	P-AMP	00
16	H-AMP-60	00
17	V-SHIFT-60	00
18	H-PHASE-60	00
19	H-PHASE-TEXT	00
1A	H-PHASE-SECAM	00
1B	H-PHASE-RGB	00
1C	P-AMP-16 : 9	00
1D	358NTSC-LUMA-DELAY	111
1E	443NTSC-LUMA-DELAY	111

OPTIONS data values		
ITEM	**DESCRIPTION**	**DATA VALUE**
TUN	TUNER TYPE	0
SAT	SATELLITE ENABLE	0
AUD	AUDIO SYSTEM	00
ATS	AUTO TUNING SORT	0
STD	RECEPTION STANDARD	0
SYS	COLOUR SYSTEM	0
AVI	NO. OF AV INPUTS	0
AVD	AV DUBBING	–
EEX	CHASSIS TYPE	–
SPK	SPEAKER SW ENABLED	1
EEP	EEPROM SIZE	–
ABG	AGC GAIN - BG	10
AI	AGC GAIN - I	10
AL	AGC GAIN - L	10
ADK	AGC GAIN - DK	10
MNP	NICAM PRESCALE	70
TXT	TELETEXT TYPE	–
FFT	FAST / TOP TEXT	0
VOL	VOLUME PRESCALE	70
HYP	HYPERSOUND	0
SCP	SCART PRESCALE	1B
FMP	FM PRESCALE	23

table 2.2C EEPROM Default data values.

2.3 VIF CIRCUITS

2.3.1 RF-AGC

VR101 (adjacent to the tuner)

1. Connect an RF signal such as an off-air broadcast.
2. Check the AFT is on for the current channel.
3. Adjust VR101 so that the picture and sound exhibit no noise, beat or intermodulation distortion.

2.4 DEFLECTION CIRCUITS

2.4.1 Important notes

Before making any adjustments, if you have changed the CRT, FLYBACK TRANSFORMER or made any changes in the deflection circuits; adjust the CRT bias as described in 2.6.1 steps 1 ~ 6 (*Video Circuits – Screen control*).

Check the VERTICAL BREATHING CORRECTION as follows:

1. Select the VCJ adjustment display.
2. Set the adjustment code to "01" with buttons "2" or "8" on the remote control.
3. If necessary, adjust the data value to "-31" using buttons "4" or "6" on the remote control.

2.4.2 Horizontal centre

Code 09 (H-PHASE)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "09" with buttons "2" or "8" on the remote control.
4. Adjust the horizontal position with buttons "4" or "6" on the remote control.

2.4.3 Horizontal width

Code 06 (H-AMP)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "06" with buttons "2" or "8" on the remote control.
4. Adjust horizontal width with the buttons "4" or "6" on the remote control.

2.4.4 East-West PCC

Code 05 (CORNER CORRECTION)
Code 03 (PARABOLA TILT)
Code 02 (PARABOLA AMP)

1. Connect an RF PAL Crosshatch signal.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "05" with buttons "2" or "8" on the remote control.
4. Adjust the data value to "-25" with buttons "4" or "6" on the remote control.
5. Set the adjustment code to "03" with buttons "2" or "8" on the remote control.

6. Watching the second vertical line in from both sides of the screen (figure 2.4A), make any upper and lower distortion symmetrical using buttons "4" or "6" on the remote control.
7. Set the adjustment code to "02" with buttons "2"or "8" on the remote control.
8. Adjust the straightness of both vertical lines (figure 2.4B) using buttons "4" or "6" on the remote control.
9. Repeat steps 1 to 8 above if necessary.
10. Connect a VCR and play a PAL-Monoscope alignment tape.
11. Make sure the horizontal width and horizontal centre are correct. If necessary readjust Horizontal Centre ("09") and Horizontal Width ("06") again.

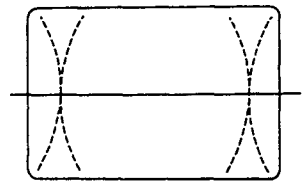


fig. 2.4A

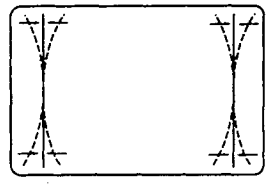


fig. 2.4B

2.4.5 Height and linearity

Code 00 (V-AMP)
Code 04 (V-LIN)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "00" (V-AMP) with buttons "2" or "8" on the remote control.
4. Adjust the circle to a true circle with buttons "4" or "6" on the remote control.
5. Set the adjustment code to "04" (V-LIN) with buttons "2" or "8" on the remote control.
6. Adjust the linearity to be the same for the top and bottom halves of the circle using buttons "4" or "6" on the remote control.
7. Set the adjustment code to "00" (V-AMP) with buttons "2" or "8" on the remote control.
8. Readjust V-AMP with buttons "4" or "6".
9. Repeat the steps above, if necessary.

2.4.6 Vertical centre

Code 08 (V-SHIFT)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "08" (V-SHIFT) with buttons "2" or "8" on the remote control.
4. Adjust the centre line of picture to be within +/- 3mm from the vertical centre on the screen using buttons "4" or "6" on the remote control.

2.4.7 60Hz Deflection circuit offsets

Code 14 (V-AMP 60)
Code 15 (P-AMP 60)
Code 16 (H-AMP 60)
Code 17 (V-SHIFT 60)
Code 18 (H-PHASE 60)

1. Connect an RF 60Hz Crosshatch signal.
2. Select the VCJ adjustment display.

3. Select each adjustment code in turn with buttons "2" or "8" on the remote control and adjust each item to the figures shown in table 2.4C below using buttons "4" or "6" on the remote control.

CODE:	14	15	16	17	18
25AV1BD/BDS/LD	+8	+1	-2	+14	-4
28AV1BD/BDS/LD	+7	+2	-2	+8	-5

table 2.4C 60Hz adjustment offsets

2.5 CRT CIRCUITS

2.5.1 White balance

Code 0A (B-DRIVE)
Code 0B (G-DRIVE)
Code 0C (R-DRIVE)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment codes to "0A", "0B" and "0C" in turn and pre-adjust each to "0".
4. Adjust codes "0A" and "0C" to adjust the white balance.

2.5.2 Focus

FOCUS control on the Flyback Transformer

1. Connect an RF signal such as an off-air broadcast.
2. Adjust the FOCUS control for the best overall focus.

2.6 VIDEO CIRCUITS

Perform the following adjustments after adjusting the Deflection circuits. Allow the TV to warm up for 20 minutes before proceeding

2.6.1 Brightness and Contrast

SCREEN control on the Flyback Transformer
Code 0F (COLOUR SATURATION)
Code 0E (BRIGHTNESS)
Code 0D (CONTRAST)
BEAM CURRENT (using connector TP adjacent to the Flyback Transformer)

1. Connect an RF Crosshatch signal.
2. Select the VCJ adjustment display.
3. Make sure that the Screen Up/Down Request Bit is set to "00". If not, adjust the SCREEN control on the Flyback Transformer.
4. Change the external signal to a Colour-bar.
5. Readjust the SCREEN control to give "00".
6. Repeat steps 1 to 5 until the Screen Up/Down Request Bit is "00" for both signals.
7. Connect an RF Colour-bar signal.
8. Set the adjustment code to "0F" with buttons "2" or "8" on the remote control.
9. Adjust the data value to "-32" with buttons "4" or "6" on the remote control.

10. Set the adjustment code to "0E" with buttons "2" or "8" on the remote control.
11. Adjust using buttons "4" or "6" so that a slight difference in brightness can be seen between blue and black areas.
12. Set the adjustment code to "0D" with the buttons "2" or "8" on the remote control.
13. Connect a DC ammeter's "+" lead to connector TP pin 1 on the MAIN-PCB and the "–" lead to connector TP pin 2.
14. Adjust the beam current using buttons "4" or "6" on the remote control to 1300±20µA for 28AV1BD / BDS / LD or 1000±20µA for 25AV1BD / BDS / LD.
15. Check, and if necessary, readjust the BRIGHTNESS, code "0E".
16. Check that the Screen Up/Down Request Bit is "00". If not, repeat steps 1 to 13 above.
17. Now proceed to the Colour Output adjustment.

2.6.2 Colour output

Make this adjustment only after adjusting the White Balance, Brightness and Contrast.

Code 0F (COLOUR SATURATION)

1. Connect an RF Colour-bar signal.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "0F" with buttons "2" or "8" on the remote control.
4. Connect an oscilloscope to the junction of R673 and IC660 Pin 9 (BLUE-OUT) on the CRT PCB).
5. Make adjustments using buttons "4" or "6" on the remote control until the waveform is as shown in figure 2.6A.
6. Increase the resulting data value by five steps.

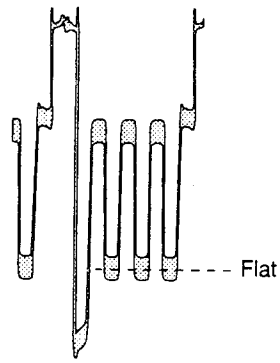


fig. 2.6A

2.7 POWER CIRCUIT

2.7.1 B4 Voltage

VR951 (on main PCB next to the SMT)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Push the OPTIMUM button on the remote control.
3. Connect a DC voltmeter's "+" lead to TP91 on the MAIN PCB and the "–" lead to GROUND.
4. Adjust VR951 so that the voltage is 145±2V.

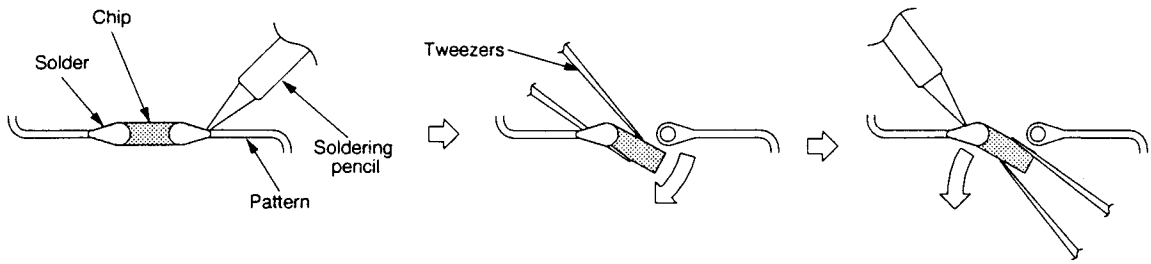
3 CHIP PARTS REPLACEMENT

Some resistors, shorting jumpers (0Ω resistor), ceramic capacitors, transistors and diodes are chip parts (i.e. surface mount or SMD parts). When replacing these parts, note the following precautions:

- Use fine tipped, well insulated soldering iron of about 30 watts and tweezers.
- Melt the solder and remove the Chip Parts carefully so as not to tear off the copper foil from the printed circuit board.
- Discard removed chips, do not re-use them.
- Do not apply heat for more than 3 seconds to new Chip Parts.
- Avoid using a rubbing action when soldering.
- Take care not to scratch or damage the Chip Parts when soldering.
- Supplementary cementing is not required.

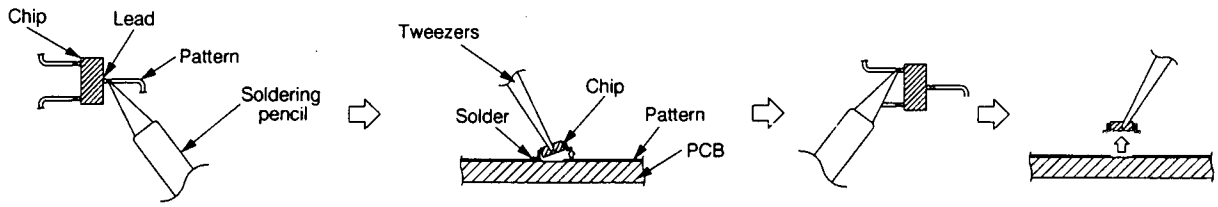
3.1 Removal of Chip Resistors, capacitors, etc.

1. Grasp the part with tweezers. Melt the solder at both sides alternately and remove one side of the part with a twisting motion.
2. Melt the solder at the other side and remove the part.



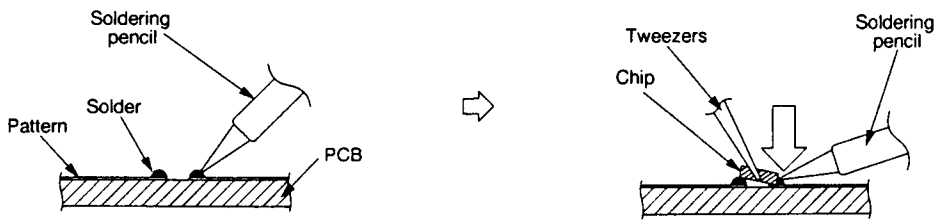
3.2 Removal of Chip Transistors

1. Melt the solder on one lead and lift that side upward.
2. Simultaneously melt the solder of the two remaining leads and lift the part from the PCB.



3.3 Replacement

1. Pre-solder the contact points on the circuit pattern.
2. Press the part downward with tweezers and apply the soldering iron as shown in the figure.



4 VIDEOCRYPT DECODER

The VideoCrypt decoder PBC is only serviceable by Mitsubishi service department.

In the event of a fault on this PCB, please follow this procedure:

1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

Failure to return the PCB within 30 days will incur full replacement PCB costs.

NOTE

The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.

User Guide

TV CONTROLS

MAINS ON/ OFF

Press to switch the TV on or off.

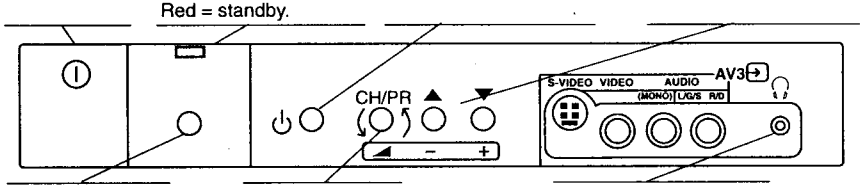
POWER ON/ STANDBY lamp

Green = TV on
Amber = Dubbing mode
(See page 26)
Red = standby.

STANDBY

Press to switch the TV on from standby. Press again to switch it back to standby.

Press these buttons to change channel up or down by one number, or to adjust the volume up or down.



REMOTE CONTROL SENSOR

Point your remote control here.

CH/PR

Press to choose volume adjustment or channel change.

HEADPHONE SOCKET

Plugging in headphones will switch off the loudspeakers.

THE REMOTE CONTROL

STANDBY
Press to switch on from standby. Press again to switch back to standby.

OFF-TIMER
Used to programme a switch-off time.
See "OFF-TIMER"

VCR SWITCH
Press and hold this button to operate the VCR functions.
(Mitsubishi VCRs only).

DISPLAY
Press to display channel and AV mode information, press again to cancel. If a menu screen is displayed, you can press this button to turn it off.

VOLUME UP/DOWN
Press the ◿+ button to increase volume and the ◿– button to decrease volume.

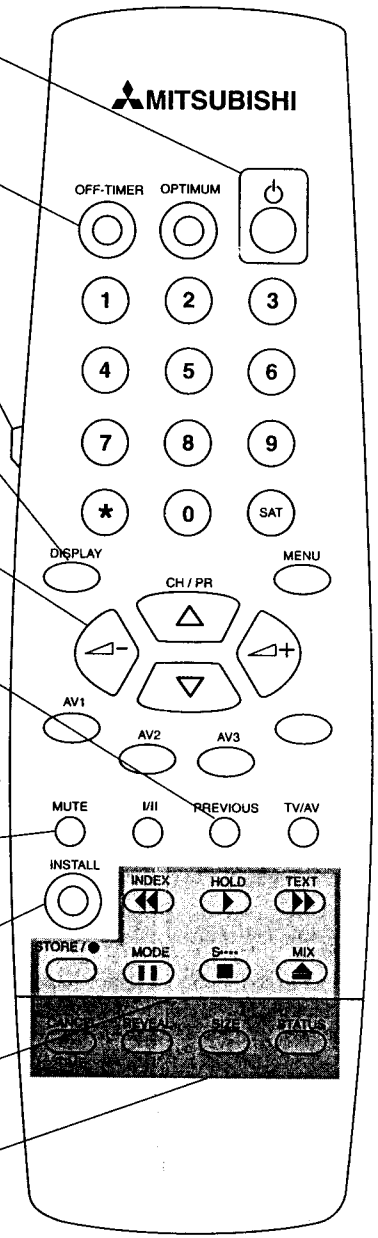
PREVIOUS
Pressing this button changes the channel to the previous one selected. Useful for switching quickly between two channels. Also switches from an AV input back to TV.
This button is also used during Teletext operation to select the previous page.

MUTE
Press to switch off the sound. Press again (or press a volume button) to switch the sound back on.

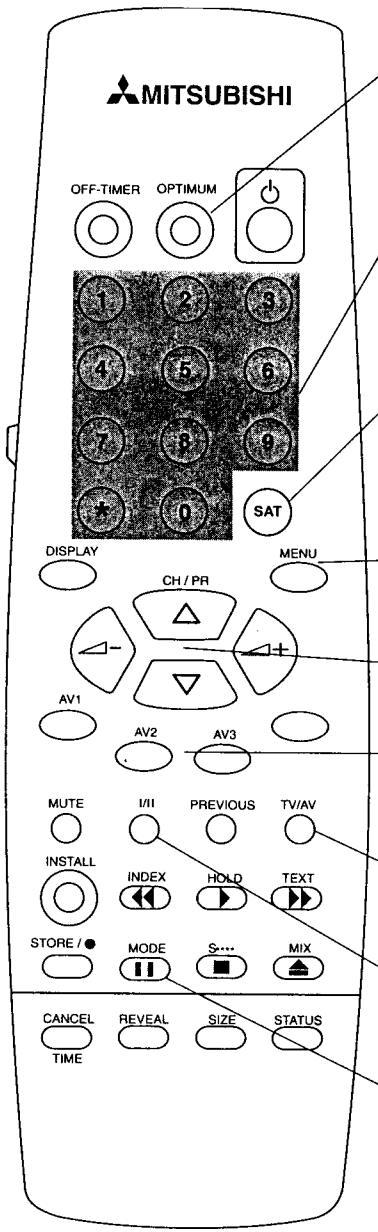
INSTALL
Press to switch on and switch off the INSTALL menu.
See "INSTALL MENU"

VCR BUTTONS
For operating a Mitsubishi VCR.
(Use while holding VCR switch).

TELETEXT BUTTONS
See "TELETEXT"



THE REMOTE CONTROL



OPTIMUM
Press to return to the factory pre-set levels for all the picture settings.
See "MENU SYSTEM"

PROGRAMME NUMBER
Press to select a channel position from 0 to 9. To select a higher number, for example 16, first press "*" and then "1" and "6".
You may also switch the TV on from standby by pressing any single number button.

SAT
Press this button followed by any number button to select a satellite channel. To select a higher number, for example 54, press **SAT** followed by "*" and then "0", "5" and "4".
Also used to select satellite menu mode.
See "SATELLITE SYSTEM"

MENU
Press to switch on, change and switch off the menu.
See "MENU SYSTEM"

CH/PR △ ▽
Press these buttons to change the channel up or down by one number.

COLOUR BUTTONS
Used for MENU adjustments, Teletext selection and for selecting an AV input.
See "MENU SYSTEM", "TELETEXT" and "AV CONNECTIONS"

TV/AV
Press to switch between AV input or TV operation.
See "AV CONNECTIONS"

SOUND MODE I/II
Used to select a sound source during a NICAM broadcast.
See "NICAM STEREO"

MODE
Press to switch Subtitles on during normal viewing (if available). Press the CANCEL button to cancel.
See "MENU SYSTEM"

INSTALL MENU

Press the **INSTALL** button to display the INSTALL MENU.

You use the colour buttons **RED GREEN YELLOW** and **BLUE** to make selections from the INSTALL MENU.

```
INSTALL MENU
ENGLISH
AUTO TUNING
SHUFFLE
MANUAL TUNING
CENTRE MODE        NORMAL
```

DISPLAY LANGUAGE

Press the **RED** button to change the language—English, German, French or Dutch.

Press the **INSTALL** button to switch off the display.

CENTRE MODE

This control should be set to **NORMAL**. However, if you are *not* using the centre speaker with your TV you should set this control to **PHANTOM**. You are advised to connect and use the centre speaker, as the sound quality will be reduced without it.

Use the ◿+ or ◿– buttons to change this setting.

See "DOLBY PRO LOGIC SURROUND" starting on page 27 for more details.

TUNING

This TV has 90 programme positions (0...89) that can be tuned to receive different channels. This TV is designed to receive broadcasts to the standard: PAL I, UHF channels A to C and cable channels S1 to S1 (VB1) and VHF channels D to J and cable channels S11 to S41 (VB2).

Note that BD and BDS models will only receive on the UHF band.

AUTOMATIC TUNING

1. Press the **INSTALL** button to display the INSTALL MENU.

```
INSTALL MENU
ENGLISH
AUTO TUNING
SHUFFLE
MANUAL TUNING
CENTRE MODE        NORMAL
```

2. Start the Auto-Tuning system by pressing the **GREEN** button *twice* (Press once to select **AUTO-TUNING**, press a second time to confirm), the Auto-Tuning display appears.

```
AUTO TUNING SYSTEM
SEARCHING 01
FOUND STATION
CHECKING DATA
```

It will take a few minutes for the TV to find, name and store all the available stations. Auto-Tuning searches the lower VHF bands, VB1 and VB2, and then the UHF band.

(BD and BDS models search UHF band only).

When Auto-Tuning is complete, the Auto-Tuning display disappears and the TV switches to programme position 1 (BBC1 in the UK, RTE1 in Ireland).

NB You might find programme positions after position 5 filled with duplicated or weak stations. For details of moving or deleting these stations refer to *"MOVING and DELETING A PROGRAMME POSITION"* on page 18.

MOVING and DELETING A PROGRAMME POSITION

1. Press the **INSTALL** button to display the INSTALL MENU.
2. Select **SHUFFLE** from the INSTALL MENU by pressing the **YELLOW** button.
3. Use △ or ▽ to highlight in blue the position you wish to MOVE or DELETE.

```
SHUFFLE MENU
PR  NAME     SKIP   PR  NAME     SKIP
00  --------  OFF   05  --------  OFF
01  BBC1----  OFF   06  BBC1----  OFF
02  BBC2----  OFF   07  BBC2----  OFF
03  CH-4----  OFF   08  ITV-----  OFF
04  --------  OFF   09  CH-4----  OFF
```

TO MOVE THE SELECTED POSITION:

a. Press the **YELLOW** button. The blue highlight now turns *red.*

b. Use △ or ▽ to highlight in blue the new position you wish to move to.

c. Press the **YELLOW** button *twice* to move the programme position.* Programmes between the new and old positions will move up or down to fill the gap.

```
SHUFFLE MENU
PR  NAME     SKIP   PR  NAME     SKIP
00  --------  OFF   05  --------  OFF
01  BBC1----  OFF   06  BBC1----  OFF
02  BBC2----  OFF   07  BBC2----  OFF
03  CH-4----  OFF   08  ITV-----  OFF
04  --------  OFF   09  CH-4----  OFF
```

```
SHUFFLE MENU
PR  NAME     SKIP   PR  NAME     SKIP
00  --------  OFF   05  --------  OFF
01  BBC1----  OFF   06  --------  OFF
02  BBC2----  OFF   07  BBC1----  OFF
03  ITV-----  OFF   08  BBC2----  OFF
04  CH-4----  OFF   09  CH-4----  OFF
```

TO DELETE THE SELECTED PROGRAMME POSITION:

Press the **GREEN** button *twice* to delete this position.* Programmes after the deleted position will move up to fill the gap.

4. Press the **INSTALL** button to exit the SHUFFLE MENU and store the settings.

* *The first press displays "**O.K.**" at the bottom of the screen. If you change your mind and do not wish to move or delete this position—wait. The "**O.K.**" will disappear after a few seconds.*

PROGRAMME SKIP

This TV has a "skip" feature which allows you to pre-set a programme number so that you skip over it when you change channels using the △ or ▽ buttons.

1. Press the **INSTALL** button to display the INSTALL MENU.
2. Select **SHUFFLE** from the INSTALL MENU by pressing the **YELLOW** button.
3. Use △ or ▽ to highlight the position you wish to skip and press the **BLUE** button to switch from **SKIP OFF** to **SKIP ON.**
4. Repeat step 3 for other programme numbers as required.

```
SHUFFLE MENU
PR  NAME     SKIP   PR  NAME     SKIP
00  --------  OFF   05  --------  ON
01  BBC1----  OFF   06  --------  OFF
02  BBC2----  OFF   07  BBC1----  OFF
03  ITV-----  OFF   08  BBC2----  OFF
04  CH-4----  OFF   09  CH-4----  OFF
```

5. Press the **INSTALL** button to exit the SHUFFLE MENU and store the settings.

CHANGING THE PROGRAMME NAME

1. Press the **INSTALL** button to display the INSTALL MENU.
2. Select **SHUFFLE** from the INSTALL MENU by pressing the **YELLOW** button.
3. Select the programme number you wish to name (or re-name) using △ or ▽.
4. Press the **RED** button to display a pointer under the name.
5. Press ◿+ or ◿– to change the letter (or number) above the pointer.
   A blank space is shown as "–".
6. Press the **RED** button to move the pointer to the right and repeat 5.
7. Repeat steps 5 and 6 to complete the name.
8. Press the **INSTALL** button to exit the SHUFFLE MENU and store the settings.

SHUFFLE MENU

PR	NAME	SKIP	PR	NAME	SKIP
00	V-------	OFF	05	--------	ON
01	■	OFF	06	--------	OFF
02	BBC2----	OFF	07	BBC1----	OFF
03	ITV-----	OFF	08	BBC2----	OFF
04	CH-4----	OFF	09	CH-4----	OFF

SHUFFLE MENU

PR	NAME	SKIP	PR	NAME	SKIP
00	VCR-----	OFF	05	--------	ON
01	■	OFF	06	--------	OFF
02	BBC2----	OFF	07	BBC1----	OFF
03	ITV-----	OFF	08	BBC2----	OFF
04	CH-4----	OFF	09	CH-4----	OFF

MANUAL TUNING

To tune a station manually, for example, to tune in your VCR or a new station.

1. Press the **INSTALL** button to display the INSTALL MENU.
2. Select **MANUAL TUNING** by pressing the **BLUE** button.
3. Press △ or ▽ to move the blue highlight to the channel guide.
4. Select a programme number using the number buttons. Press one number button for a single number or press "*" then 2 buttons for a 2 digit number.
5. Start tuning by pressing ◿+ or ◿– (for tuning up or down the band).The channel guide turns **RED** while searching then **WHITE** after a station is found.
   *If the channel guide does **not** turn red, press △ or ▽ to highlight **AFT** (Auto Fine Tuning) and switch it on by pressing ◿+.*

MANUAL TUNING MENU

PROG	01
CHANNEL	
AFT	ON
NAME	--------
SYSTEM	AUTO PAL

FINE TUNING

Sometimes it may be necessary to fine tune a station manually, in the case of abnormal interference, for example.

a. Press △ or ▽ to highlight **AFT** and switch it off by pressing ◿+.
b. Press △ or ▽ to highlight the channel guide and adjust the fine tuning using the ◿+ or ◿– buttons.

6. When you have finished your tuning adjustments, press the **STORE** button to store the new settings.
7. Press the **INSTALL** button to exit the MANUAL TUNING menu.

MANUAL TUNING MENU

PROG	01
CHANNEL	
AFT	ON
NAME	--------
SYSTEM	AUTO PAL

SATELLITE SYSTEM (BDS MODELS ONLY)

This TV can receive satellite broadcasts as well as normal television broadcasts. There are 150 satellite channels, many of them pre-tuned as shown in the separate satellite channel list. Some of these channels are scrambled, so if you wish to see them, you must pay a subscription to get a viewing card.

See "VIEWING SCRAMBLED CHANNELS" below.

BEFORE YOU START

Before you can use the satellite module of your Mitsubishi television you must have a satellite dish fitted and connected to your TV.

It is important that the dish is aimed in the exact direction of the satellite you wish to receive from and that you have all the necessary cables required to connect the dish to your television.

NB You must make sure that the LNB settings in the SAT SET-UP MENU are correct for the type of LNB attached to your dish.
See "MAKING ADJUSTMENTS TO THE LNB SETTINGS" on page 23.

SELECTING A SATELLITE CHANNEL

You can directly select a satellite channel by pressing the **SAT** button followed by the appropriate **NUMBER** button. To select a higher number, for example 54, press **SAT** followed by "*" and then the *three* numbers "0", "5" and "4".

You may wish to set up some satellite channels so that you can select them with the △ or ▽ buttons or the number buttons (I.E., without using the **SAT** button).
See "QUICK ACCESS TO SATELLITE CHANNELS" on page 20 for details.

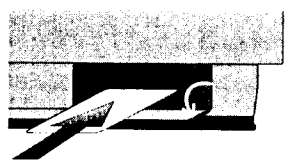
VIEWING SCRAMBLED CHANNELS

You will find that some channels are scrambled. To view these channels you will need a subscription card. From time to time, scrambled channels become visible and supply subscription information.

Your TV has a built-in internal decoder to descramble VideoCrypt programmes.

Open the door as shown to reveal the card slot.

Check your card is the right way round.
Always insert the card so that the metal pad faces downwards and is away from you. Make sure that you push the card all the way in.



Some channels operate a "PAY PER VIEW" system which requires a different kind of payment card. This is a system in which you only pay for certain "events" such as a football match, film premiere and so on.
See "PAY PER VIEW CONTROL" on page 23 for details .

NB Some methods of scrambling require an external decoder. You can attach an external decoder to the AV1 or AV2 SCART sockets found at the rear of the TV.
See "AV CONNECTIONS" on page 30 for details of the SCART connectors and "USING AN EXTERNAL DECODER" on page 24 for details of setting up the system.

QUICK ACCESS TO SATELLITE CHANNELS

You can copy satellite channels onto programme positions so that you can select them with the △ or ▽ buttons or the number buttons (I.E., without using the **SAT** button). This is useful for channels you use frequently.

Any satellite channels you copy onto programme positions will *replace* the current programme position. Therefore, you should not copy satellite channels onto programme positions you want to keep.

1. Press the **INSTALL** button to display the **INSTALL MENU.**
2. Press the **YELLOW** button to display the SHUFFLE MENU.
3. Use △ or ▽ to highlight the position required for a satellite channel.
4. Press the **SAT** button. The SAT PROGRAMME LISTINGS display appears, showing a list of all the available satellite channels.
5. Press △ or ▽ to highlight the satellite channel you wish to copy.
6. Press the **YELLOW** button to copy this channel to the selected programme position. The SHUFFLE MENU reappears showing the satellite channel you have copied.
7. Repeat steps 3~6 for other satellite channels you wish to copy onto programme positions.
8. Press the **INSTALL** button *twice* to return to normal TV mode.

SHUFFLE MENU

PR	NAME	SKIP	PR	NAME	SKIP
00	--------	OFF	05	--------	OFF
01	BBC1----	OFF	06	--------	OFF
02	BBC2----	OFF	07	BBC1----	OFF
03	ITV-----	OFF	08	BBC2----	OFF
04	CH-4----	OFF	09	CH-4----	OFF

SAT PROGRAMME LISTINGS

PR	NAME	LOCK	PR	NAME	LOCK
000	SKY-1--	--	005	VOX-----	--
001	SKY-NEWS	--	006	BRAVO---	--
002	UK-GOLD-	--	007	NICKELOD	--
003	SKYSPORT	--	008	DISCOVRY	--
004	EUROSPOR	--	009	CHILDREN	--

SHUFFLE MENU

PR	NAME	SKIP	PR	NAME	SKIP
00	--------	OFF	05	--------	ON
01	BBC1----	OFF	06	SKYNEWS-	OFF
02	BBC2----	OFF	07	BBC1----	OFF
03	ITV-----	OFF	08	BBC2----	OFF
04	CH-4----	OFF	09	CH-4----	OFF

NB Once you have copied a satellite channel onto a programme position you can delete or move the channel as with other programme positions.

See "MOVING and DELETING A PROGRAMME POSITION" on page 18 for details.

MANUALLY TUNING A SATELLITE CHANNEL

When tuning a satellite channel you should find out the frequency, LNB polarity, video settings and de-emphasis settings for that station. This can be found in any popular satellite television magazine.

1. Press the **SAT** button and key in any number button to select a satellite channel.
2. Press the **SAT** button followed by the **MENU** button. The SAT SET-UP MENU appears.
3. Press the **GREEN** button to display the SAT MANUAL TUNING MENU.
4. Use △ or ▽ to highlight **PROGRAM** and select the program number you wish to manually tune using ◿+ or ◿–.
5. Use △ or ▽ to highlight **LNB POLARITY** and switch to **H, V, V TONE** or **H TONE** as required using ◿+ or ◿–.
6. Use △ or ▽ to highlight **DE-EMPHASIS** and select **PANDA, NRS, 50us, 75us** or **J17** as required using ◿+ or ◿–.
7. If necessary, use △ or ▽ to highlight **DECODER** and switch to **NONE** using ◿+ or ◿–.
8. Use △ or ▽ to highlight **VIDEO SETTINGS** and switch to **NORMAL, PAL, MAC** or **BASEBAND** as required (The **RADIO** setting of this control allows for screen blanking while you listen to satellite radio stations).
   See "SATELLITE RADIO AND FOREIGN LANGUAGES" on page 21 for more details.
9. Use △ or ▽ to highlight **FREQUENCY**.
10. If you know the correct frequency for the desired channel you should key it in using the **NUMBER** buttons. Otherwise, hold ◿+ or ◿– to tune up or down until you find the channel you want.
11. If necessary, use △ or ▽ to highlight **DECODER** and switch to **INTERNAL** (for VideoCrypt scrambled channels, **EXTERNAL1** (decoder connected to AV1 SCART socket) or **EXTERNAL2** (decoder connected to AV2 SCART socket).
    See "USING AN EXTERNAL DECODER" on page 24 for more details.
12. Press the **STORE** button to memorise the new settings. The display flashes red to confirm the action.
13. Repeat steps 4~12 for other satellite channels you wish to manually tune.
14. Press the **GREEN** button to exit the SAT MANUAL TUNING MENU.

SAT MANUAL TUNING

PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	PAL
DECODER	INTERNAL
AUDIO SETTINGS	STEREO A
	LEFT 7.02
	RIGHT 7.20
DE-EMPHASIS	NRS
NAME	SKY-NEWS

NB Some satellite television channels also broadcast radio stations and extra sound channels with foreign languages. It is possible to change the audio frequency of your satellite tuner to listen to these radio stations or to change the language of a satellite channel.

You will find information about the different languages in any popular satellite television magazine.

See "SATELLITE RADIO AND FOREIGN LANGUAGES" on page 21 for more details.

SATELLITE RADIO AND FOREIGN LANGUAGES

Some satellite television channels also broadcast radio stations and extra sound channels with foreign languages. It is possible to change the audio frequency of your satellite tuner to listen to these radio stations or to change the language of a satellite channel.

You will find information about the different languages in any popular satellite TV magazine.

1. Press the **SAT** button, and key in the satellite channel number. To select a higher number, for example 54, press **SAT** followed by "*" and then the *three* numbers "0", "5" and "4".
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **GREEN** button to display the SAT MANUAL TUNING menu.

SCREEN BLANKING—RADIO

a. If necessary, use △ or ▽ to highlight **DECODER** and switch to **NONE** using ◿+ or ◿–.

b. Use △ or ▽ to highlight **VIDEO SETTINGS.**

c. Use ◿+ or ◿– to select **RADIO**. The screen will become blank. If you want to switch screen blanking off again, return **VIDEO SETTINGS** to the normal viewing position for the satellite channel.

4. Use △ or ▽ to highlight **AUDIO SETTINGS.**
5. Use ◿+ or ◿– to select **MONO, STEREO A, STEREO B** or **MANUAL** as required. You will notice the LEFT and RIGHT sound frequencies changing. Adjust the control until *both* frequencies are correct for the radio station or language variant you wish to hear.

SAT MANUAL TUNING	
PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	RADIO
DECODER	INTERNAL
AUDIO SETTINGS	STEREO A
	LEFT 7.02
	RIGHT 7.20
DE-EMPHASIS	NRS
NAME	SKY-NEWS

SAT MANUAL TUNING	
PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	PAL
DECODER	INTERNAL
AUDIO SETTINGS	STEREO A
	LEFT 7.02
	RIGHT 7.20
DE-EMPHASIS	NRS
NAME	SKY-NEWS

MANUALLY TUNING A RADIO STATION

If a satellite channel has a lot of radio stations, it may be better to manually adjust the audio frequencies. In this case select **MANUAL** from the **AUDIO SETTINGS** control. Use △ or ▽ to highlight **LEFT** or **RIGHT** and adjust the audio frequency using ◿+ or ◿–. You can also key in the frequency directly using the number buttons.

6. Press the **STORE** button to memorise the new settings.
7. Press the **GREEN** button to exit the menu system.

SAT MANUAL TUNING	
PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	PAL
DECODER	INTERNAL
AUDIO SETTINGS	MANUAL
	LEFT 7.02
	RIGHT 7.20
DE-EMPHASIS	NRS
NAME	SKY-NEWS

CHANGING A SATELLITE CHANNEL NAME

1. Press the **SAT** button, and key in the satellite channel number. To select a higher number, for example 54, press **SAT** followed by "*" and then the *three* numbers "0", "5" and "4".
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **GREEN** button to display the SAT MANUAL TUNING MENU.
4. Use △ or ▽ to highlight **NAME**. A pointer appears at the first letter or number in the channel name.
5. Use ◿+ or ◿– to change the letter or number above the pointer.
6. Use △ or ▽ to move the pointer to the right.
7. Repeat steps 5~6 until the channel name is complete.
8. Press the **STORE** button to memorise the new settings. The display flashes red to confirm the action.
9. Press the **GREEN** button to exit the SAT MANUAL TUNING MENU and store the new settings.

SAT MANUAL TUNING	
PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	PAL
DECODER	INTERNAL
AUDIO SETTINGS	MANUAL
	LEFT 7.02
	RIGHT 7.20
DE-EMPHASIS	NRS
NAME	

SAT MANUAL TUNING	
PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	PAL
DECODER	INTERNAL
AUDIO SETTINGS	MANUAL
	LEFT 7.02
	RIGHT 7.20
DE-EMPHASIS	NRS
NAME	NEWSTAT

NB If you have copied a satellite channel onto a programme position for selection using the △, ▽, or the number buttons, you can also change the channel name from the SHUFFLE menu. *See "CHANGING THE PROGRAMME NAME" on page 19.*

SATELLITE EVENT TIMER

If you have a VCR connected to the AV2 SCART socket, you can set an "event timer" so that you can record different satellite channels at varying times. The "event timer" can be set so that you can record satellite channels up to 28 days in advance.

You can also select a "**CURRENT**" event. This starts an event immediately and also locks the satellite channel so that it cannot be changed (accidentally) while the event is being recorded. It is also possible to set "regular events" so that you can record the same channel at the same time daily or weekly.

NB To use this feature you should have AV2 DUBBING switched **ON** and the AV2 OUTPUT set to **SAT**.
See "AV2 DUBBING" on page 26 for details.

Some Mitsubishi VCRs have a connector which allows them to automatically activate the satellite event timer via a link lead.
See "SATELLITE CONTROL" on page 24 for details.

1. Press the **SAT** button and select a satellite channel.
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **YELLOW** button to display the SAT EVENT TIMER MENU.
4. Use △ or ▽ to highlight **EVENT**.
5. Use ◿+ or ◿– to select an event number, or **CURRENT** if you want to set an event to start now.

SAT EVENT TIMER

TUE	09:30
EVENT	1
PROGRAM	001 SKY-NEWS
DAY	2ND THURSDAY
REGULAR EVENT	OFF
START	20:05
STOP	22:35

6. Use △ or ▽ to highlight **PROGRAM** and select the satellite channel you want to set this event for using ◿+ or ◿–.

SETTING REGULAR EVENTS:

a. Use △ or ▽ to highlight **REGULAR EVENT** and adjust to **DAILY** or **WEEKLY** using ◿+ or ◿–.
b. Use △ or ▽ to highlight **DAY** if necessary and select the day of the event using ◿+ or ◿–.

SETTING A SINGLE EVENT:

a. Use △ or ▽ to highlight **REGULAR EVENT** and adjust to **OFF** using ◿+ or ◿–.
b. Use △ or ▽ to highlight **DAY** and adjust to the day (up to 28 days ahead) that you want to set an event for (I.E., If today is a Monday tomorrow is "1st Tuesday" and next Monday is "1st Monday").

7. Use △ or ▽ to highlight **START** and key in the starting time of the event using the number buttons.
8. Use △ or ▽ to highlight **STOP** and key in the finishing time of the event using the number buttons.

NB If the starting time of an event occurs before the finishing time of a current event, the next event will start and interrupt the current one.
If you try to select a new channel while an event is in progress, the message "**EVENT ENABLED**" will appear on the screen. To cancel the event, select **CLEAR** from the SAT EVENT TIMER menu by pressing the **GREEN** button.

LOCKING SATELLITE CHANNELS

You can lock satellite channels so that they cannot be watched unless a 4 digit number is keyed in.

If you lock any satellite channels the satellite menus will also become locked. This is to prevent the re-tuning of a non-locked channel.

If you select a satellite channel which has been locked, you will be prompted for the PIN number. You will not be able to view the satellite channel unless you key in the correct PIN number.

The Personal Identification Number (PIN) is pre-set as "3030", but you can change this number if you want.

See "CHANGING THE PIN NUMBER" on page 23 for details.

LOCKING AND UNLOCKING A SATELLITE CHANNEL

1. Press the **SAT** button and select a satellite channel.
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **BLUE** button to display the SAT PROGRAMME LISTINGS.
4. Use △ or ▽ to select the satellite channel you wish to lock or unlock.
5. Press the **RED** button to LOCK or UNLOCK this channel.

SAT PROGRAMME LISTINGS

PR	NAME	LOCK	PR	NAME	LOCK
000	SKY-1--	--	005	VOX-----	--
001	SKY-NEWS	--	006	BRAVO---	--
002	UK-GOLD-	--	007	NICKELOD	--
003	SKYSPORT	--	008	DISCOVRY	--
004	EUROSPOR	--	009	CHILDREN	--

ENTER PIN XXXX

An "XXXX" prompt will appear.

6. Key in your PIN number now.

If you key in the wrong number, the "XXXX" prompt will reappear.

When you have keyed in the correct PIN number, the channel will LOCK or UNLOCK.

SAT PROGRAMME LISTINGS

PR	NAME	LOCK	PR	NAME	LOCK
000	SKY-1--	--	005	VOX-----	--
001	SKY-NEWS	ON	006	BRAVO---	--
002	UK-GOLD-	--	007	NICKELOD	--
003	SKYSPORT	--	008	DISCOVRY	--
004	EUROSPOR	--	009	CHILDREN	--

7. Press the **BLUE** button to exit the SAT PROGRAMME LISTINGS and return to normal viewing.

SAT SET-UP MENU

Press the **SAT** button and select a satellite channel.

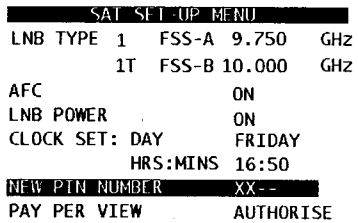
Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.

Press the **MENU** button again to switch off the display.

CHANGING THE PIN NUMBER

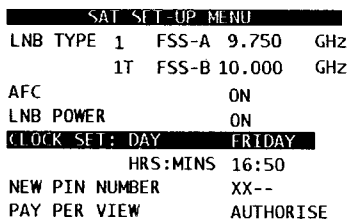
1. Use △ or ▽ to highlight **NEW PIN NUMBER**.
2. Key in the *current* PIN number. If you key in the wrong number, the "XXXX" prompt will reappear.

   When you have keyed in the correct PIN number, an **"O.K."** will appear.
3. Key in the new PIN number. The **"O.K."** will disappear in a few seconds.



SETTING THE CLOCK

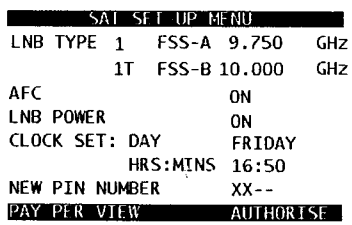
1. Use △ or ▽ to highlight **DAY**.
2. Use ◿+ or ◿– to select the correct day of the week.
3. Use △ or ▽ to highlight **HRS:MINS**.
4. Key in the correct time using the **NUMBER** buttons.



PAY PER VIEW CONTROL

Use this control to authorise payment for a PAY PER VIEW event.

1. Use △ or ▽ to highlight **PAY PER VIEW**.
2. Press and hold ◿+ or ◿– for a few seconds to authorise payment and unscramble the channel. An **"O.K."** appears and the display *briefly* flashes red to confirm the action.



SATELLITE SYSTEM (BDS MODELS ONLY)

MAKING ADJUSTMENTS TO THE LNB SETTINGS

It is possible to make adjustments to the LNB settings from the SAT SET-UP MENU.

Press the **SAT** button and select a satellite channel.

Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.

LNB TYPE

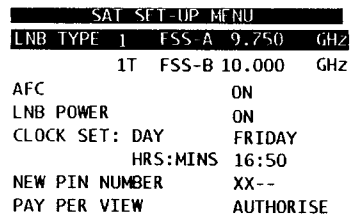
It is important, when fitting your satellite dish, that you know the frequency of your LNB's local oscillator. If this does not match the **LNB TYPE** settings, you may receive the wrong channel, or no channel at all.
These are the most common LNB types:

LNB TYPE	FREQUENCY RANGE	TYPICAL SATELLITES
9.750 FSS-A	10.700—11.800GHz	ASTRA 1A, 1B, 1C, 1D/ Intelsat / Eutelsat
10.000 FSS-B	10.920—12.050GHz	ASTRA 1, 1B, 1C / Intelsat / Eutelsat
11.475T-COM	12.425—13.525GHz	Telecom 2A, 2B, 1C

"LNB TYPE" shows the name of the LNB and the frequency (in GHz) of the LNB's local oscillator.

"FREQUENCY RANGE" shows the range over which you should tune during manual tuning of a satellite station. It is also possible to select **MANUAL**, which allows you to key in the LNB's local oscillator frequency (between 9 GHz and 12 GHz). This is used if your LNB is not one of the common types or if your LNB is slightly offset.

1. Use △ or ▽ to highlight **LNB TYPE 1**.
2. Select the LNB type using ◿+ or ◿–. If you select **MANUAL**, key in the frequency using the number buttons.

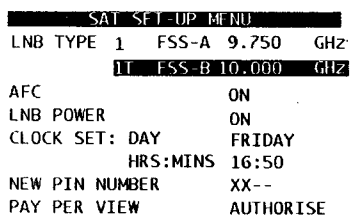


IF YOU HAVE A DUAL BAND LNB

If you have a dual band "tone switching" LNB, two band settings can be made to cover the upper and lower frequencies.

a) Use △ or ▽ to highlight **LNB TYPE 1T**.

b) Select the second LNB type using ◿+ or ◿–. If you select **MANUAL**, key in the frequency using the number buttons.



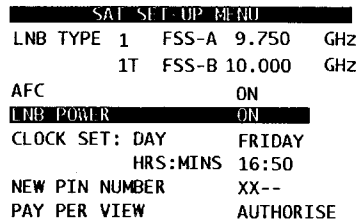
MAKING ADJUSTMENTS TO THE LNB SETTINGS (continued).

LNB POWER

Your television should provide power to the LNB *unless* the LNB is on a communal antenna. The normal setting for this control is **ON**.

If your LNB is on a communal antenna, it may be that it should not receive power from your television. If this is the case you should set this control to **OFF**.

1. Use △ or ▽ to highlight **LNB POWER**.
2. Adjust to **ON** or **OFF** using ◿+ or ◿–.

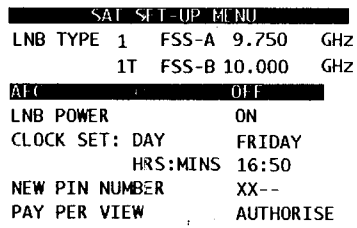


AFC

Your receiver has been pre-set for Automatic Frequency Control (AFC). You should not need to change this unless you are trying to receive a very weak signal with a speckled picture. In this case, you can switch AFC off and adjust the LNB TYPE frequency slightly using the **MANUAL** setting of the **LNB TYPE** control.

See "LNB TYPE" on page 17 for details.

1. Use △ or ▽ to highlight **AFC**.
2. Switch **ON** or **OFF** using ◿+ or ◿–.



NB Adjustments to the AFC affect *all* the channels and you should therefore return the setting to its usual position when you are finished watching the weaker station.

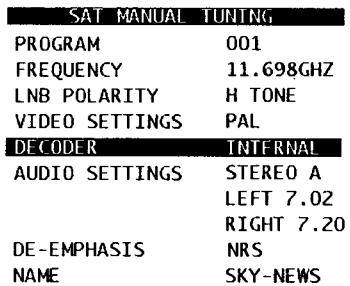
SATELLITE SYSTEM (BDS MODELS ONLY)

USING AN EXTERNAL DECODER

It is possible to connect one or two external decoders to the AV1 and AV2 SCART sockets at the back of your TV.
See "AV CONNECTIONS" on page 30 for details of connecting equipment to the AV1 and AV2 SCART sockets.

NB Your TV has a built-in decoder to descramble VideoCrypt programmes.

1. Press the **SAT** button and key in the satellite channel number. To select a higher number, for example 54, press **SAT** followed by "*" and then the *three* numbers "0", "5" and "4".
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **GREEN** button to display the SAT MANUAL TUNING MENU.
4. Use △ or ▽ to highlight **DECODER**.
5. Use ◿+ or ◿– to select **NONE**, **EXTERNAL1** (decoder connected to AV1 SCART socket), **EXTERNAL2** (decoder connected to AV2 SCART socket) or **INTERNAL**.



6. Press the **STORE** button to memorise the new settings.
7. Press the **GREEN** button to exit the menu system.

SATELLITE CONTROL

Some Mitsubishi VCRs have a feature which allows them to change satellite channels automatically for recording different channels at different times. If your VCR has this feature, you will need to key the BRAND CODE **"01"** into your VCR to set the correct satellite type.

If your VCR has this control it will be able to activate the "event timer" of your TV automatically when recording a satellite channel.

See your VCR instructions for details of using this feature.

You will need a link lead to connect your VCR to your TV. This lead is available from your dealer and you should ask for "SATELLITE LEAD" part number 999D161010.

MENU SYSTEM

Press the **MENU** button to display a menu screen. If necessary, press again to display **MAIN MENU**. To select a sub-menu, press a colour button.

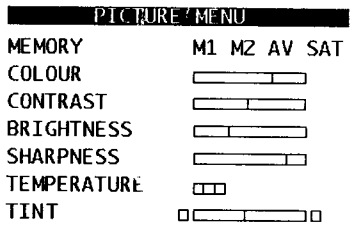
MAIN MENU

AV-MEMORY M1 M2 AV SAT

Select an AV-MEMORY by pressing ◿+ or ◿–.

There are 4 memory positions, M1, M2, AV and SAT which will store any changes you make to the sound or picture adjustments. This allows you to have 4 different sets of adjustments for different types of programmes.

PICTURE MENU



Press the **MENU** button to display a menu screen.

If the **PICTURE MENU** is *not* displayed, press the **RED** button.

In the **PICTURE** menu, you use the four buttons △, ▽, ◿+ and ◿– to select and adjust the controls.

MEMORY

You can select an AV-MEMORY by pressing ◿+ or ◿–.

COLOUR

Adjust the strength of the colours. Use skin colours to judge the best setting.

CONTRAST

The contrast should be adjusted to suit the light level of your surroundings.

BRIGHTNESS

Adjust the brightness so that the black parts of the picture are only just black.

SHARPNESS

Adjust the sharpness to change how sharp the picture looks.

TEMPERATURE

Adjust the colour temperature to a slightly warmer (red) or cooler (blue) tone.

TINT

This function is only available when watching an NTSC programme through an AV input. See "AV CONNECTIONS" on page 30 for further details.

Adjust the tint of the picture using skin colours to judge the best setting.

OPTIMUM

With the blue highlight on **MEMORY**, pressing the **OPTIMUM** button returns ***all*** the picture settings to the factory pre-set levels for the current AV Memory.

With the blue highlight on any picture control, pressing the **OPTIMUM** button returns only that control to the factory pre-set level.

SOUND MENU

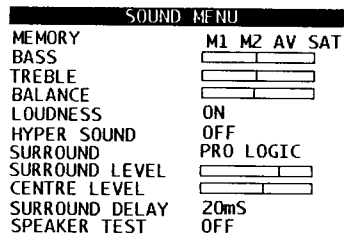
Press the **MENU** button to display a menu screen.

If the **SOUND MENU** is *not* displayed, press the **GREEN** button.

In the **SOUND** menu, you use the four buttons △, ▽, ◿+ and ◿– to select and adjust the controls.

MEMORY

You can select an AV-MEMORY by pressing ◿+ or ◿–. There are 4 memory positions, M1, M2, AV and SAT which will store any changes you make to the sound adjustments.



BASS

Adjusts the level of the low-frequency sounds.

TREBLE

Adjusts the level of the high-frequency sounds.

LOUDNESS

Switch on or off using ◿+ or ◿– to boost the bass level.

HYPER SOUND

Switch on or off using ◿+ or ◿– to boost the very low frequency sounds.

*Note that **LOUDNESS** and **HYPERSOUND** cannot both be switched on at the same time.*

SURROUND

"SURROUND" is a system to create a surrounding stereophonic sound. There is a choice of 8 sound effects:

PRO LOGIC	Use when receiving stereo sound from a Dolby Surround encoded source. *See "DOLBY PRO LOGIC SURROUND" on page 27 for details.*
DISCO	Suited to small venue music, including jazz, cabaret and classical chamber music.
THEATRE	Suited to opera, rock and easy listening music.
CONCERT HALL	Suited to orchestral classical music and light orchestral music.
CATHEDRAL	Suited to organ music and New Age.
STADIUM	Suited to stadium rock and sporting events.
OFF	For normal mono or stereo sound.
PSEUDO STEREO	Creates the effect of stereo sound from a mono source.

OPTIMUM

With the blue highlight on **MEMORY**, pressing the **OPTIMUM** button returns ***all*** the sound setting except **LOUDNESS** and **HYPER SOUND** to the factory pre-set levels for the current AV Memory.

With the blue highlight on any sound control, pressing the **OPTIMUM** button returns only that control to the factory pre-set level.

SPECIAL MENU

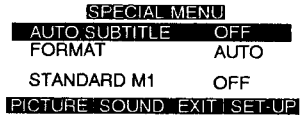
Press the **MENU** button to display a menu screen.

If the SPECIAL MENU is *not* displayed, press the **YELLOW** button.

AUTO SUBTITLE

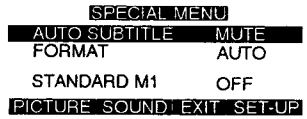
This TV has a feature which allows you to set Teletext subtitles (when available) to appear all the time, never, or only when the TV volume is muted. You can set Auto Subtitles following the procedure below.

1. Highlight **AUTO SUBTITLE** using △ or ▽, if necessary.



2. Use ◿+ or ◿– to select **ON**, **OFF** or **MUTE.**

OFF = No automatic subtitles,
MUTE = Automatic subtitles when volume is muted,
ON = Subtitles appear all the time they are available.

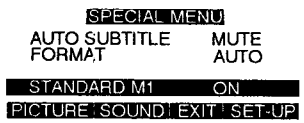


3. Exit the menu system by pressing the **YELLOW** button.

STANDARD M1

When this is switched **ON** picture adjustments will return to factory pre-set levels when you switch off the TV. When switched **OFF** any adjustments made to the picture settings will be remembered even when the TV is switched off.

1. Highlight **STANDARD M1** using △ or ▽.



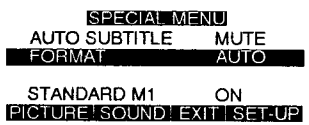
2. Switch **OFF** or **ON** using ◿+ or ◿–.

FORMAT

This switches the picture size for the correct display of normal (4x3) pictures or wide screen (16x9) pictures. If you are watching a 16x9 video in a suitable VCR the picture has to be squashed to return it to the correct "letter-box" shape otherwise objects on the screen will look too tall and thin.

The usual setting is **4x3**, but you can manually select **AUTO** or **16x9** if you like. (Automatic only works with the AV input).

1. Highlight **FORMAT** using △ or ▽.



2. Switch to **AUTO**, **4x3** or **16x9** using ◿+ or ◿–.

SET-UP MENU

Press the **MENU** button to display a menu screen. If the SET-UP menu is not displayed, press the **BLUE** button.

AV2 DUBBING

The TV can route signals from AV1, AV3 or the internal satellite system while in standby. This allows overnight video recording of satellite programmes (for example) without having to leave the TV fully switched on.

Note that before you can route satellite signals to AV2 you ***must*** program the SAT EVENT TIMER. This provides power to the satellite module during standby mode.

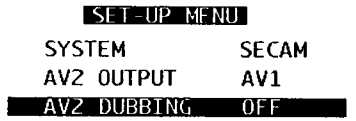
See "SAT EVENT TIMER" on page 22 for details.

This control will not work if an external decoder has been connected to the AV2 SCART socket.

See "USING AN EXTERNAL DECODER" on page 24 for details.

NB When AV2 DUBBING is switched **ON** the Power-on / Standby lamp will turn amber when the TV is in standby mode.

1. Highlight **"AV2 DUBBING"** with the △ or ▽ buttons.
2. Select **ON** or **OFF** with the ◿+ or ◿– buttons.



See "AV CONNECTIONS" on page 30 for details of connecting a VCR or etc to your Television via the AV sockets.

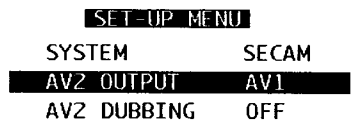
AV2 OUTPUT

The output of the AV2 connector can be selected to be the same as the TV signal (the current TV channel), the current satellite channel, or the AV1 or AV3 input signal.

This control is not available if an external decoder has been connected to the AV2 SCART socket.

See "EXTERNAL DECODER" on page 24 for details.

1. Highlight **"AV2 OUTPUT"** with the △ or ▽ buttons.
2. Select **TV**, **AV1**, **SAT**, or **AV3** with the ◿+ or ◿– buttons.

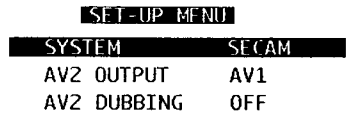


NB The AV2 output is always a standard video signal even when you have an S-video source, such as an S-VHS video recorder, connected to AV3.

SYSTEM

"AUTO" is the normal setting. However, in some cases you may want to select the colour system manually. This may be useful if you are receiving a weak station or when using some types of VCR with your TV.

1. Highlight **SYSTEM** using △ or ▽.
2. Switch to **AUTO**, **PAL**, **60PAL**, **SECAM**, **NTSC 358** or **NTSC 443** with the ◿+ or ◿– buttons.



NB Note that the NTSC colour system only functions in AV mode.

NICAM STEREO

To check for a Nicam broadcast, press the **I/II** button. The sound mode will also be displayed when you change channel or the Nicam broadcast mode changes.

The on-screen display will show how Nicam is being broadcast for the current channel:

NICAM STEREO	= Nicam stereo
NICAM II	= Nicam dual-sound (bilingual)
NICAM I	= Nicam mono
NICAM OFF	= Nicam available but switched off
NO DISPLAY	= Nicam not being received

If Nicam is being received, you can switch between the available Nicam mode and Nicam off by pressing the **I/II** button.

NB Broadcasters will usually transmit mono programmes in stereo mode, I.e. the sound is actually mono but the on-screen display shows "NICAM STEREO".

DUAL SOUND (BILINGUAL) RECEPTION

During a dual-sound (bilingual) broadcast pressing the **I/II** button repeatedly selects the following options:

channel I on both speakers	NICAM
channel II on both speakers	NICAM
channel I on left speaker, II on right speaker	NICAM
Nicam off	NICAM OFF

DOLBY PRO LOGIC SURROUND

Dolby Surround Pro Logic gives realistic sound that literally surrounds you. It is effective when viewing programmes that are made with Dolby Surround soundtracks. Prerecorded video tapes and laser disks can be easily identified by the DOLBY SURROUND printing on the package. TV programmes also show this type of indication in their credits.

In Dolby Surround Pro Logic, in addition to the TV's left and right internal speakers, there are external rear "Surround" speakers and a centre speaker. These speakers give the sound a three dimensional quality.

Manufactured under licence from Dolby Laboratories Licensing Corporation. DOLBY the double-D symbol and PRO LOGIC are trademarks of Dolby Laboratories Licensing Corporation.

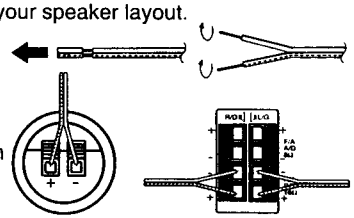
1. CONNECT THE SURROUND AND CENTRE SPEAKERS

Before you connect your speakers, you should assemble the TV stand following the instructions supplied with the stand. You should also set the CENTRE MODE in the INSTALL MENU to **NORMAL**.

See "CENTRE MODE" on page 18 for details.

If you do not want to use the stand or connect the centre speaker to your TV you should set this control to **PHANTOM**. However, it is recommended that you connect the centre speaker as this is an important part of your speaker layout.

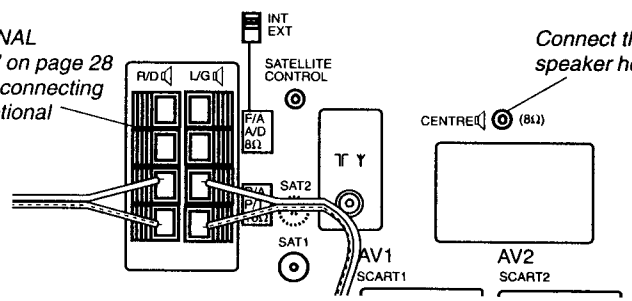
1. Prepare the speaker leads by removing the insulation on both ends, separating the wires and twisting the cores as shown.
2. On the back of the speakers you will find one red and one black connector. Push the tabs on the connectors and insert the speaker leads*.



3. On the back of the TV you will find 4 red and black connectors as shown. Push the tabs on the connectors and insert the surround speaker leads making sure that you use the connectors marked "R / A / P / T 16 Ω". *Make sure that the '+' and '-' terminals on the TV are connected to the '+' and '-' terminals on the speakers by following the marking on the wire.*
4. Insert the centre speaker pin connector into the socket marked **CENTRE** 🔊.

See "OPTIONAL SPEAKERS" on page 28 for details of connecting and using optional speakers.

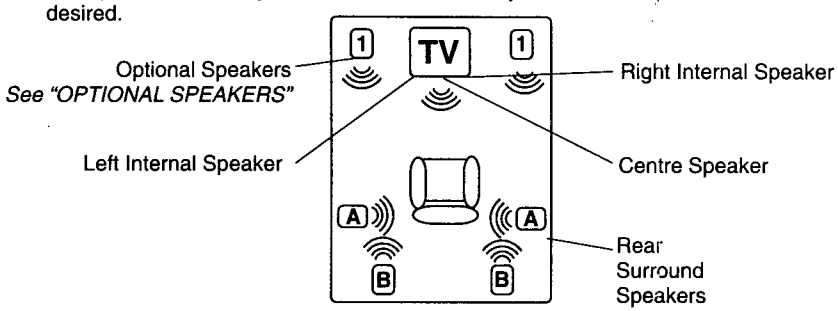
Connect the centre speaker here.



2. SET UP THE LISTENING AREA

The rear surround speakers should be placed either facing forwards (B) or preferably inwards (A). It is best if they are a little above the level of your head.

The speakers have keyhole slots on the back so you can fix them to the wall if desired.



Position the speakers and decide on your optimum viewing position.

3. SWITCH ON THE TEST SIGNAL

Your TV produces a test signal which is used for balancing the volume level from the speakers.

1. Press the **MENU** button to display a menu screen.
2. If the **SOUND** menu is not displayed, press the **GREEN** button to display the **SOUND** menu.
3. Use △ or ▽ to select **SURROUND** and switch to **PRO LOGIC** using ◿+ or ◿−.

SOUND MENU	
MEMORY	M1 M2 AV SAT
BASS	
TREBLE	
BALANCE	
LOUDNESS	ON
HYPER SOUND	OFF
SURROUND	PRO LOGIC
SURROUND LEVEL	
CENTRE LEVEL	
SURROUND DELAY	20mS
SPEAKER TEST	OFF

4. Use △ or ▽ to select **SPEAKER TEST** and switch **ON** using ◿+ or ◿−. A "pink noise" test signal will sound for two seconds on each speaker channel in turn. The sequence for the test signal is:

LEFT... ***CENTRE...*** ***RIGHT...*** ***REAR...***

*To hold the test signal on any sound channel, press the **HOLD** button. Press the **HOLD** button again to continue with the sequence.*

4. ADJUST THE SOUND CHANNELS

Adjust the sound channels so that the volume of each channel sounds the same when heard from your normal viewing position.

LEFT and RIGHT CHANNEL ADJUSTMENT

To adjust the left and right sound channels, use △ or ▽ to select **BALANCE** and adjust using ◿+ or ◿−.

CENTRE CHANNEL ADJUSTMENT

To adjust the **CENTRE SPEAKER** sound channel, use △ or ▽ to select **CENTRE LEVEL** and adjust using ◿+ or ◿−.

REAR CHANNEL ADJUSTMENT

To adjust the **REAR SURROUND** sound channel, use △ or ▽ to select **SURROUND LEVEL** and adjust using ◿+ or ◿−.

5. ADJUST THE SURROUND DELAY

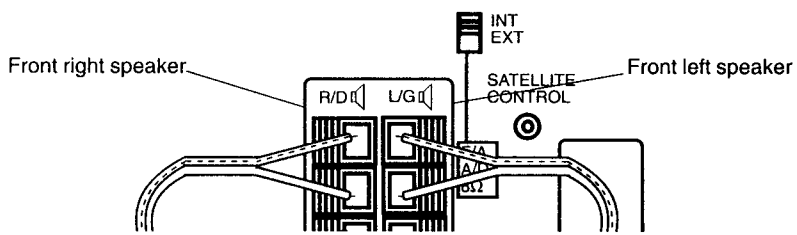
You can adjust the surround delay for different sizes of rooms, or for different layouts of your speakers. The surround delay is pre-set to 20mS but you can increase or decrease this as desired.

1. Press the **MENU** button to display a menu screen.
2. If the **SOUND** menu is not displayed, press the **GREEN** button.
3. Use △ or ▽ to highlight **SURROUND** and select **PRO LOGIC** using ◿+ or ◿−.
4. Use △ or ▽ to highlight **SURROUND DELAY** and adjust using ◿+ or ◿−.
5. Press the **MENU** button to exit the **SOUND** menu.

SOUND MENU	
MEMORY	M1 M2 AV SAT
BASS	
TREBLE	
BALANCE	
LOUDNESS	ON
HYPER SOUND	OFF
SURROUND	PRO LOGIC
SURROUND LEVEL	
CENTRE LEVEL	
SURROUND DELAY	20mS
SPEAKER TEST	OFF

OPTIONAL SPEAKERS

Normally, the speakers in the TV carry the left and right sound channels. However, it is possible to connect a pair of external speakers to your TV to carry these channels. A switch at the back of your TV switches between internal **(INT)** or external speakers **(EXT)** These should be 8 ohm speakers rated at 10w R.M.S or greater.



TELETEXT

BASIC OPERATION

With the TV switched on, press the **TEXT** button to turn Teletext on, an index page is displayed. The top line will look something like this:

Choose a subject and input the page number of the subject by pressing the number buttons on the remote control unit. As you press the buttons the numbers will appear at the top left hand corner of the TV screen.

To see an index page simply press the **INDEX** button.

At the bottom of the page there are 4 coloured page titles (usually these are subject areas) to see one of these—press the matching **COLOUR** button.

To superimpose the Teletext page on the TV picture (MIX mode), press the **MIX** button.

To stop using Teletext and return to watching TV—press the **TV/AV** button.

OTHER FUNCTIONS

△ ▽

These buttons can be used to select the next page number up or down—but note that the next page number may not exist.

SIZE

Pressing the **SIZE** button repeatedly enlarges the top half of the page, then the bottom half and then returns the page to normal.

HOLD

Some Teletext pages contain several "sub-pages" which are displayed one after another. If you want to stop the sub-pages changing—press the **HOLD** button. The symbol ⊟ will appear at the top left of the page. To cancel this function press the **HOLD** button again or select another page.

REVEAL (REVL)

Pressing the **REVL** button will display hidden text, for example, on a quiz page with concealed answers. Press the button again to hide the text.

CANCEL CANCEL/TIME

Pressing the **CANCEL/TIME** button restores the television picture but leaves the Teletext system switched on. You can choose new pages without interrupting a television programme. Press again to restore Teletext.

The page number will be displayed when a page is received for the first time, or when a page is updated.

TIME CANCEL/TIME

Press the **CANCEL/TIME** button to see a digital clock on the screen when Teletext is switched off. The clock will disappear after a few seconds. Teletext must be available for this to work.

ADVANCED TEXT OPERATION (LIST MODE)

The Teletext system in this TV has an Advanced Text feature which allows you to memorise a list of 4 page numbers which can be different for each of the first 30 programme positions, I.E. programmes 0~29. Programme numbers higher than this share the list for programme 29.

1. Press the **MODE** button to select teletext "list" mode. The letter "L" and four coloured page numbers will appear at the bottom of the screen, E.g.:

L	**100**	**888**	**255**	**255**
	red	**green**	**yellow**	**blue**

2. To see one of these pages—press the matching **COLOUR** button.
3. To change the numbers to your own preferred pages:
   a. Press a colour button.
   b. Enter a page number (press 3 number buttons, for example).
   c. Repeat this with the other colour buttons and with other page numbers if you like.
   d. Store these new page numbers so that they are automatically displayed each time list mode is selected. Press the **STORE** button and hold it until the coloured numbers turn white. If the new page numbers are not stored then the old page numbers will return next time you select list mode.
4. To turn off list mode press the **MODE** button again.

OFF TIMER

The off-timer can be programmed to automatically switch the television to standby after a period of up to 90 minutes.

SETTING THE TIMER

1. Press the **OFF-TIMER** button, the screen shows: ⏲ 00.
2. Press the button again to make the display count down in ten minute steps until you see the time you want.
3. Wait until the display disappears. The timer is now set.

TO CANCEL THE TIMER

Press the **OFF-TIMER** button then press again until the display shows zero. Alternatively, press the standby button twice.

TO CHECK THE REMAINING TIME

When the display is not on the screen, press the button once.

NB For the last 10 minutes the display will appear *briefly* in RED every minute. For the last minute the display is continuous until the TV switches off.

AERIAL

The aerial socket at the back of the TV is a standard 75 ohm coaxial aerial socket. Connect your aerial in the usual way.

SATELLITE LNB

Connect your satellite dish to this socket.

EXTERNAL SPEAKERS

See "DOLBY PRO LOGIC SURROUND" starting on page 27 for details of connecting external speakers to your TV.

AV1 SCART SOCKET

Inputs: Audio, normal (composite) video and RGB.
Normally an RGB source will switch the TV to RGB input automatically. If not, you can select "(RGB)AV1" with the **RED** button.

Outputs: Audio and normal video. The output is always the same as the signal received through the aerial socket (the "TV signal") even when you a e watching an AV input.

AV2 SCART SOCKET

Inputs: Audio and normal (composite) video.

Outputs: Audio and normal video. This output can be switched to provide either the TV signal, satellite signal, or the AV1 or AV3 input signal.

NB The output is normal video only, an S-video input is converted to normal video and an RGB signal cannot be output at all.).

See "AV2 OUTPUT" on page 26 for details of how to set the output.

AV3 INPUT

This input is behind the door on the front of your TV. There are four sockets: 1) an S-video socket for connecting a super-VHS VCR or similar; 2) two audio inputs—stereo left and right; and 3) a standard (or "composite") video socket (RCA phono type) for a conventional VCR.

NOTE: if you try to connect both the S-video socket and the standard socket at the same time, the TV will use the signal from the S-video input in preference to the standard input.

Note that if the audio output of your external video equipment is mono, make sure that you connect the audio plug to the "(MONO)" socket so that the signal is automatically sent to both the left and right TV speakers.

AV CONNECTIONS

SATELLITE CONTROL

Some Mitsubishi VCRs have a feature which allows them to change satellite channels automatically for recording different channels at different times. If your VCR has this feature, you will need to key the BRAND CODE **"01"** into your VCR to set the correct satellite type.

If your VCR has this control, it will be able to activate the "event timer" of your TV automatically when recording a satellite channel.

See your VCR instructions for details of using this feature.

You will need a link lead to connect your VCR to your TV. This lead is available from your dealer and you should ask for "SATELLITE LEAD" part number 999D159010.

STANDBY DUBBING

The TV can route signals from AV1, AV3 or the internal satellite system to AV2 while in standby. This allows overnight video recording of satellite programmes (for example) without having to leave the TV switched on.

See "SET-UP MENU" on page 26 for details of setting up and using this feature.

CHOOSING AN AV INPUT

You can select an AV input by pressing the **TV/AV** button on the remote control, or by pressing the **RED**, **GREEN** or **YELLOW** button. The on-screen display shows what you have selected: **AV1**, **AV2** or **AV3**.

1. Press the **RED** button to select **AV1**, the **GREEN** button to select **AV2** or the **YELLOW** button to select **AV3**.
2. Press the same colour button again to change the input as shown:

RED BUTTON:	**AV1**	⟷	**RGB-AV1**
GREEN BUTTON:	**AV2**	⟷	**S-AV2**
YELLOW BUTTON:	**AV3** (does not change)		

If you have connected S-Video equipment to the AV3 input the on-screen display will show "S-AV3" instead of "AV3".

Pressing any **NUMBER** button will directly select TV mode from AV mode.

FORCED TV MODE

If you have connected equipment to the AV1 or AV2 SCART socket with a SCART to SCART connecting lead, you can usually expect the equipment to force the TV into AV mode automatically as soon as the equipment is set to play. In this case the on-screen display shows "**AV1**" or "**AV2**" in ***red***.

To select a TV channel while the TV is forced into AV mode press the **TV/AV** button, the **PREVIOUS** button or any **NUMBER** button to select "forced TV"—shown by the channel display turning ***blue***.

Press the **TV/AV** button to return to AV mode.

6 PARTS LIST

6.1 NOTES

6.1.1 Model-specific parts

As this service manual covers more than one model, the Service Parts List indicates where certain parts are model-specific:

- **25** = all three 25" models, **28** = all three 28" models,
- **BD, BDS** and **LD** refer to those models irrespective of CRT size,
- single models are indicated like this (for example); **25BD** = 25AV1BD.

If there is no such indication then the parts are common to *all* models covered by this manual.

6.1.2 Ordering

In order to expedite delivery of replacement parts, please specify:

1. Model number and Serial number
2. Part Number and Description
3. Quantity

Unless full information is provided a delay in execution of the order may result.

6.1.3 Safety

Safety Critical components are indicated thus: ⚠ and must only be replaced with original Mitsubishi parts.

6.1.4 Component tolerances

Component value tolerances are coded as shown in table 3.1A below.

B	C	D	F	G	J	K	M	N	V	X	Z	P	Q
±0.1	±.025	±0.5	±1	±2	±5	±10	±20	±30	+10 -10	+40 -20	+80 -20	+100 -0	+30 -10

table 3.1A Component tolerances

.2 SERVICE PARTS LIST

CRTs

⚠		255P807010	CRT	A66EGW83X101	28
⚠		255P914030	CRT	A59EAK71X11	25

ICs

IC100	SAT	270P315010	IC SAT	STV0030	BDS
IC101	MAIN	270P341040	IC	TDA4472-B	
IC101	SAT	263P053060	IC	4053BP	BDS
IC102	SAT	263P053060	IC	4053BP	BDS
IC104	SAT	270P355030	IC	MC7812CT	BDS
IC105	SAT	274P681090	IC-C-MOS	ST9291J5OA/A90	BDS
IC106	SAT	274P747010	IC-C-MOS	16K E˝PROM	BDS
IC108	SAT	270P316010	IC REG (Includes insulator)	LM317T	BDS
IC109	SAT	270P355010	IC	MC7805CT	BDS
IC201	MAIN	270P254010	IC	MC44031	
IC202	MAIN	270P263010	IC	TEA6415C	
IC301	DOLBY	270P209010	IC	MSP3410	
IC351	MAIN	270P259010	IC	TDA7263	
IC3A2	AUD-PWR	270P259010	IC	TDA7263	
IC3B1	AUD-PWR	270P259010	IC	TDA7263	28
IC3D1	DOLBY	274P682010	IC	DSP56004FJ52	
IC3D2	DOLBY	274P683010	IC-SRAM-32K8	MCM6206DP25	
IC3D3	DOLBY	274P685010	IC-CMOS-MICRO	MC68HC705C8	
IC3D4	DOLBY	272P966020	IC	TDA1543	
IC3D5	DOLBY	270P269010	IC	MCT4558CPI	
IC3D6	DOLBY	270P269010	IC	MCT4558CPI	
IC3D7	DOLBY	263P066060	IC	HEF 4066 BP	
IC3D8	DOLBY	267P036030	IC FILTER 15KHz	AFL87F15000E1	
IC3D9	DOLBY	270P355030	IC	MC7812CT	
IC401	MAIN	270P261010	IC	TDA8171	
IC551	MAIN	272P406010	IC	TEA 2031A	
IC660	CRT	270P207010	IC-CRT-OUTPUT	TEA5101	
IC701	MAIN	274P681080	IC	ST9291N6B1OB/A80	
IC702	MAIN	274P686010	IC	ST24C08	
IC7701	TEXT	274P571030	IC	SAA5281ZP/E	
IC7702	TEXT	274P570020	IC	PCB83C654P	
IC7703	TEXT	274P171010	IC	ST24C02AB1	
IC901	MAIN	272P514010	IC	TEA 2261	
IC951	MAIN	270P260010	IC	TDA8137	

TRANSISTORS

Q102	MAIN	260P748030	TRANSISTOR	JC501-R	
Q102	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q103	MAIN	260P748030	TRANSISTOR	JC501-R	LD
Q103	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q104	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q105	MAIN	260P748030	TRANSISTOR	JC501-R	
Q105	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q106	MAIN	260P749030	TRANSISTOR	JA101-Q	LD

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
Q106	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q107	MAIN	260P749030	TRANSISTOR	JA101-Q	LD
Q107	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q108	MAIN	260P749030	TRANSISTOR	JA101-Q	LD
Q108	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q112	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q113	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q114	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q115	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q116	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q117	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q118	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q119	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q120	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q121	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q122	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q123	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q124	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q125	SAT	260P545010	TRANSISTOR	BC327	BDS
Q126	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q127	SAT	260P545010	TRANSISTOR	BC327	BDS
Q128	SAT	260P545010	TRANSISTOR	BC327	BDS
Q129	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q130	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q131	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q132	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q135	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q136	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q137	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q138	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q139	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q251	MAIN	260P748030	TRANSISTOR	JC501-R	
Q252	MAIN	260P748030	TRANSISTOR	JC501-R	
Q253	MAIN	260P748030	TRANSISTOR	JC501-R	
Q256	MAIN	260P748030	TRANSISTOR	JC501-R	
Q301	MAIN	260C604020	TRANSISTOR	DTC124ES	
Q302	MAIN	260C604020	TRANSISTOR	DTC124ES	
Q302	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q303	MAIN	260P748030	TRANSISTOR	JC501-R	
Q304	MAIN	260P748030	TRANSISTOR	JC501-R	
Q304	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q305	MAIN	260P749050	TRANSISTOR	JA101-Q,R	
Q306	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q307	DOLBY	260P749030	TRANSISTOR	JA101-Q	
Q308	DOLBY	260P749030	TRANSISTOR	JA101-Q	
Q3A05	AUD-PWR	260C604020	TRANSISTOR	DTC124ES	
Q3A06	AUD-PWR	260C604020	TRANSISTOR	DTC124ES	
Q3A07	AUD-PWR	260C604020	TRANSISTOR	DTC124ES	28
Q3D1	DOLBY	260P748030	TRANSISTOR	JC501-R	

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
Q3D2	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D3	DOLBY	260P356010	TRANSISTOR	2SC1906	
Q3D5	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D6	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D7	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D8	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q450	MAIN	260P748030	TRANSISTOR	JC501-R	
Q451	MAIN	260P387010	TRANSISTOR	2SC2236-O,Y	
Q501	MAIN	260P748030	TRANSISTOR	JC501-R	
Q551	MAIN	260P422010	TRANSISTOR	2SC2482	
Q552	MAIN	261P007010	TRANSISTOR	S2055N	
Q6A1	CRT	260P749030	TRANSISTOR	JA101-Q	28
Q6A2	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A3	CRT	260P574020	TRANSISTOR	2SD1264A-P	28
Q6A4	CRT	260P573020	TRANSISTOR	2SB940A-P	28
Q6A5	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A7	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A8	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A9	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6E2	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E3	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E4	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E5	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E7	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E8	CRT	260C255040	TRANSISTOR	2SA950-Y FORMED	
Q701	MAIN	260C559050	TRANSISTOR	2SC1740S-E FORMED	
Q702	MAIN	260P748030	TRANSISTOR	JC501-R	
Q703	MAIN	260P749030	TRANSISTOR	JA101-Q	
Q704	MAIN	260P748030	TRANSISTOR	JC501-R	
Q705	MAIN	260P749030	TRANSISTOR	JA101-Q	
Q706	MAIN	260P749030	TRANSISTOR	JA101-Q	
Q707	MAIN	260P748030	TRANSISTOR	JC501-R	
Q708	MAIN	260P748030	TRANSISTOR	JC501-R	
Q710	MAIN	260P748030	TRANSISTOR	JC501-R	
Q711	MAIN	260P748030	TRANSISTOR	JC501-R	
Q713	MAIN	260P748020	TRANSISTOR	JC501-Q,R	
Q714	MAIN	260P748030	TRANSISTOR	JC501-R	
Q715	MAIN	260P748030	TRANSISTOR	JC501-R	
Q716	MAIN	260P748030	TRANSISTOR	JC501-R	
Q901	MAIN	261P006010	TRANSISTOR	S2000N	
Q902	MAIN	260P748030	TRANSISTOR	JC501-R	
Q951	MAIN	260P748030	TRANSISTOR	JC501-R	
Q952	MAIN	260P387010	TRANSISTOR	2SC2236-O,Y	
DIODES					
D100	SAT	264P370010	DIODE	1N4148	BDS
D101	SAT	264P370010	DIODE	1N4148	BDS
D102	SAT	264P370010	DIODE	1N4148	BDS
D103	SAT	264P370010	DIODE	1N4148	BDS
D109	SAT	264P370010	DIODE	1N4148	BDS

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
D110	SAT	264P370010	DIODE	1N4148	BDS
D111	SAT	264P370010	DIODE	1N4148	BDS
D112	SAT	264P370010	DIODE	1N4148	BDS
D113	SAT	264P370010	DIODE	1N4148	BDS
D201	MAIN	264P370010	DIODE	1N4148	
D251	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D252	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D253	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D254	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D255	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D256	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D257	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D258	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D301	MAIN	264P370010	DIODE	1N4148	
D302	MAIN	264P370010	DIODE	1N4148	
D303	DOLBY	264P370010	DIODE	1N4148	
D304	DOLBY	264P370010	DIODE	1N4148	
D3D1	DOLBY	264P370010	DIODE	1N4148	
D3D2	DOLBY	264P370010	DIODE	1N4148	
D3D3	DOLBY	264P370010	DIODE	1N4148	
D401	MAIN	264P374020	DIODE	1N4003ID	
D501	MAIN	264P463020	DIODE	EQA02-08C/RD8.2EB2	
D502	MAIN	264P370010	DIODE	1N4148	
D503	MAIN	264P371010	DIODE	BYV95B	
D504	MAIN	264P371010	DIODE	BYV95B	
D505	MAIN	264P375020	DIODE	BY228	
D506	MAIN	264P378020	DIODE	BYW96E (FORMED)	
D507	MAIN	264P371010	DIODE	BYV95B	
D508	MAIN	264P371010	DIODE	BYV95B	
D509	MAIN	264P371010	DIODE	BYV95B	
D514	MAIN	264P295010	DIODE	ES 1	25
D560	MAIN	264P370010	DIODE	1N4148	
D561	MAIN	264P493020	DIODE	RD39FB2	
D562	MAIN	264P370010	DIODE	1N4148	
D563	MAIN	264P370010	DIODE	1N4148	
D601	MAIN	264P370010	DIODE	1N4148	
D655	CRT	264P370010	DIODE	1N4148	
D656	CRT	264P370010	DIODE	1N4148	
D657	CRT	264P370010	DIODE	1N4148	
D6A1	CRT	264P370010	DIODE	1N4148	28
D6A2	CRT	264P374020	DIODE	1N4003ID	28
D6A3	CRT	264P374020	DIODE	1N4003ID	28
D6A4	CRT	264P370010	DIODE	1N4148	28
D6A7	CRT	264P372010	DIODE	BYV96E	25
D701	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D702	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D703	MAIN	264P461070	DIODE	EQA02-06D/RD6.2EB2	
D704	MAIN	264P370010	DIODE	1N4148	
D705	MAIN	264P370010	DIODE	1N4148	
D706	MAIN	264P465040	DIODE	EQA02-12AB/RD13EB1,B2	

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
D708	MAIN	264P370010	DIODE	1N4148	
D709	MAIN	264P370010	DIODE	1N4148	
D710	MAIN	264P370010	DIODE	1N4148	
D7701	TEXT	264P370010	DIODE	1N4148	
D791	LED	264P584020	DIODE LE	SML1216W-C,D	
D901	MAIN	264P376010	DIODE	BYW56	
D902	MAIN	264P376010	DIODE	BYW56	
D903	MAIN	264P376010	DIODE	BYW56	
D904	MAIN	264P376010	DIODE	BYW56	
D905	MAIN	264P371010	DIODE	BYV95B	
D906	MAIN	264P372010	DIODE	BYV96E	
D907	MAIN	264P481060	DIODE	RD3.0FB2	
D908	MAIN	264P370010	DIODE	1N4148	
D909	MAIN	264P481060	DIODE	RD3.0FB2	
D951	MAIN	264P378020	DIODE	BYW96E (FORMED)	
D952	MAIN	264P377020	DIODE	BYW95B (FORMED)	
D953	MAIN	264P377020	DIODE	BYW95B (FORMED)	
D955	MAIN	264P461080	DIODE	EQA02-06E/RD6.2EB3	
D956	MAIN	266P010020	IC-DIODE	μPC574J-K	
D957	MAIN	264P463080	DIODE	EQA02-09C/RD9.1EB3	
D959	MAIN	264P377020	DIODE	BYW95B (FORMED)	
D968	MAIN	264P371010	DIODE	BYV95B	BDS
FILTERS					
CF101	MAIN	296P024040	CERAMIC-TRAP	TPS6.0MB	
SF101	MAIN	296P144010	SAW-FILTER	OFWK3950M	BD, BDS
SF101	MAIN	296P144020	SAW-FILTER	OFWK3953M	LD
SF301	MAIN	296P145010	SAW-FILTER	OFWK9350M	
COILS					
L100	SAT	325C095090	COIL-PEAKING	4.7μH-J	BDS
L101	MAIN	325C164070	COIL-PEAKING	0.47μH-K	
L101	SAT	325C095090	COIL-PEAKING	4.7μH-J	BDS
L102	MAIN	325C161010	COIL-PEAKING	6.8μH-K	
L103	MAIN	325C121030	COIL-PEAKING	10μH-K	
L103	SAT	325C120090	COIL-PEAKING	4.7μH-K	BDS
L104	MAIN	323P175040	COIL-VIF	VIF=38.9, 39.5	
L104	SAT	325C106060	COIL-PEAKING	18μH-J	BDS
L105	SAT	325C106040	COIL-PEAKING	12μH-J	BDS
L106	MAIN	325C121030	COIL-PEAKING	10μH-K	
L201	MAIN	321C031040	COIL-RF	10μH-K	
L202	MAIN	325C120090	COIL-PEAKING	4.7μH-K	
L301	DOLBY	325C120010	COIL-PEAKING	1μH-M	
L302	DOLBY	325C120010	COIL-PEAKING	1μH-M	
L303	DOLBY	325C120010	COIL-PEAKING	1μH-M	
L304	DOLBY	325C120070	COIL-PEAKING	3.3μH-K	28
L305	DOLBY	325C120070	COIL-PEAKING	3.3μH-K	28
L306	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L307	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L308	DOLBY	325C120070	COIL-PEAKING	3.3μH-K	

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
L308	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L309	DOLBY	325C120070	COIL-PEAKING	3.3µH-K	
L309	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L310	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L311	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L314	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L315	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L316	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L317	MAIN	325C120070	COIL-PEAKING	3.3µH-K	
L3B01	AUD-PWR	325C108070	COIL-PEAKING	1000µH-J	28
L3D1	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D10	DOLBY	325C121030	COIL-PEAKING	10µH-K	
L3D11	DOLBY	325C121030	COIL-PEAKING	10µH-K	
L3D2	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D3	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D4	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D5	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D6	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D7	DOLBY	325C120090	COIL-PEAKING	4.7µH-K	
L3D8	DOLBY	325C121030	COIL-PEAKING	10µH-K	
L3D9	DOLBY	325C121030	COIL-PEAKING	10µH-K	
L401	MAIN	411P001070	LEAD-FERRITE		
L501	MAIN	409P006080	COIL-FILTER	6800µHJ	
L502	MAIN	321C030010	COIL-RF	1µH-K	
L503	MAIN	411D009020	CORE-FERRITE		
L504	MAIN	409P749010	COIL-PCC-CHOKE	15µH	
L505	MAIN	409P748010	COIL-PCC	1µH	
L551	MAIN	333P012010	COIL-HORIZ-LIN		
L6A1	CRT	411P001070	LEAD-FERRITE		28
L6A2	CRT	325C121050	COIL-PEAKING	15µH-K	28
L6A3	CRT	325C121050	COIL-PEAKING	15µH-K	28
L6A4	CRT	325C121050	COIL-PEAKING	15µH-K	28
L6A5	CRT	325C101040	COIL-PEAKING	12µH-K	28
L701	MAIN	325C121070	COIL-PEAKING	22µHK	
L702	MAIN	325C121070	COIL-PEAKING	22µHK	
L7701	TEXT	325C120010	COIL-PEAKING	1µH-M	
L7702	TEXT	325C120070	COIL-PEAKING	3.3µH-K	
L901	MAIN	321C030050	COIL-RF	2.2µH-K	
L903	MAIN	411P001070	LEAD-FERRITE		
L905	MAIN	411P001070	LEAD-FERRITE		
L951	MAIN	325D059060	COIL-PEAKING	390µH-K	
L955	MAIN	321C031090	COIL-RF	33µH-K	BDS
L991	PWR-SUB	351P047020	LINE-FILTER		
L993	PWR-SUB	351P011020	LINE-FILTER		
⚠		409P564040	COIL-DEGAUSSING		25
⚠		409P564050	COIL-DEGAUSSING		28

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
TRANSFORMERS					
⚠ T551	MAIN	334P243010	ASSY-TRANS-FLYBACK		28
⚠ T551	MAIN	334P244010	ASSY-TRANS-FLYBACK		25
T552	MAIN	336P017010	TRANS-HORIZ-DRIVE		
⚠ T901	MAIN	350P663010	TRANS-POWER		
VARIABLE RESISTORS					
VR101	MAIN	127C380080	VR-SEMIFIXED	1/5W B10K-M	
VR951	MAIN	127C380090	VR-SEMIFIXED	1/5W B20K-M	
RESISTORS					
R108	SAT	103P400090	R-M-CHIP	1/10W 47-J	BDS
R109	SAT	103P400090	R-M-CHIP	1/10W 47-J	BDS
R110	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R111	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R112	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
R113	SAT	103P404040	R-M-CHIP	1/10W 39K-J	BDS
R114	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R115	SAT	103P404040	R-M-CHIP	1/10W 39K-J	BDS
R116	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
R117	SAT	103P404080	R-M-CHIP	1/10W 82K-J	BDS
R118	SAT	103P405020	R-M-CHIP	1/10W 180K-J	BDS
R119	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
R120	SAT	103P405020	R-M-CHIP	1/10W 180K-J	BDS
R121	SAT	103P404080	R-M-CHIP	1/10W 82K-J	BDS
R122	SAT	103P406000	R-M-CHIP	1/10W 820K-J	BDS
R123	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
R126	SAT	103P406020	R-M-CHIP	1/10W 1.2M-J	BDS
R127	SAT	103P404090	R-M-CHIP	1/10W 100K-J	BDS
R128	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R129	SAT	103P404080	R-M-CHIP	1/10W 82K-J	BDS
R130	SAT	103P403060	R-M-CHIP	1/10W 8.2K-J	BDS
R131	SAT	103P404000	R-M-CHIP	1/10W 18K-J	BDS
R132	SAT	103P404090	R-M-CHIP	1/10W 100K-J	BDS
R133	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R134	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R135	SAT	103P406000	R-M-CHIP	1/10W 820K-J	BDS
R136	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R137	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R138	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R139	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R140	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R142	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R143	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R144	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R145	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R146	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R147	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R148	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R149	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R150	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
R151	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R152	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R153	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R154	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R155	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R156	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R157	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R158	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R159	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R160	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R161	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R162	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R163	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R164	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R165	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R166	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R167	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R168	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R169	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R170	SAT	103P401000	R-M-CHIP	1/10W 56-J	BDS
R171	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R180	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R181	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
R183	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
R184	SAT	MELX048010	R-M-CHIP	1/10W 6.2K-J	BDS
R185	SAT	103P403080	R-M-CHIP	1/10W 12K-J	BDS
R186	SAT	103P402020	R-M-CHIP	1/10W 560-J	BDS
R187	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R188	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R189	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
R190	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R191	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R192	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R193	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R194	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R195	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R196	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R197	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R199	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R200	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R201	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R203	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R204	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R206	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R207	SAT	103P403000	R-M-CHIP	1/10W 2.7K-J	BDS
R208	SAT	103P403000	R-M-CHIP	1/10W 2.7K-J	BDS
R209	SAT	103P409050	R-M-CHIP	1/10W 0 OHM	BDS
R210	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R211	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R212	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
R213	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R214	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R215	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R216	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R217	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R218	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R219	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R220	SAT	103P404020	R-M-CHIP	1/10W 27K-J	BDS
R221	SAT	103P403050	R-M-CHIP	1/10W 6.8K-J	BDS
R222	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R223	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R224	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R225	SAT	103P402000	R-M-CHIP	1/10W 390-J	BDS
R226	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R227	SAT	103P404040	R-M-CHIP	1/10W 39K-J	BDS
R228	SAT	103P404020	R-M-CHIP	1/10W 27K-J	BDS
R229	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
R230	SAT	103P901090	R-METAL	0.4W 560-F	BDS
R231	SAT	103P902040	R-METAL	0.4W 910-F	BDS
R232	SAT	MELX049010	R-METAL	1/4W 1.4K-F	BDS
R233	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R234	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R235	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R236	SAT	103P900090	R-METAL	0.4W 220-F	BDS
R239	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R240	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R241	SAT	103P403090	R-M-CHIP	1/10W 15K-J	BDS
R242	SAT	103P403090	R-M-CHIP	1/10W 15K-J	BDS
R245	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R246	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R247	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R248	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R249	SAT	103P404090	R-M-CHIP	1/10W 100K-J	BDS
R250	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R251	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R252	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R253	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R260	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R261	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R262	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R263	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R264	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R265	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R266	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R267	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R268	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R270	SAT	103P402060	R-M-CHIP	1/10W 1.2K-J	BDS
R271	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R272	SAT	103P404000	R-M-CHIP	1/10W 18K-J	BDS
R273	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
R352	MAIN	103P378060	R-FUSE	1/4W 3.3-J	
R353	MAIN	103P378060	R-FUSE	1/4W 3.3-J	
⚠ R3A11	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	
⚠ R3A12	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	
⚠ R3B01	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	28
⚠ R3B02	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	28
R3D64	DOLBY	103P544000	R-NETWORK	1/8W 18K-J x4	
R406	MAIN	103P397090	R-FUSE	1/2W 0.82-J	25
R508	MAIN	102P243050	R-CEMENT-METAL-SUS	5W 6.8K-K/J	
R511	MAIN	102P229010	R-CEMENT-WIRE-SUS	10W 8.2-K/J	
⚠ R512	MAIN	103P442020	R-FUSE-METAL	1W 560-K-OR-J	
⚠ R513	MAIN	103P398040	R-FUSE	1/2W 2.2-J	
⚠ R514	MAIN	103P397090	R-FUSE	1/2W 0.82-J	
⚠ R516	MAIN	103P397090	R-FUSE	1/2W 0.82-J	
⚠ R671	CRT	103P447080	R-FUSE-METAL	1W 0.68-K-OR-J	28
⚠ R671	CRT	103P448040	R-FUSE-METAL	1W 2.2-K-OR-J	25
⚠ R6B1	CRT	103P370010	R-FUSE	1/4W 10-J	28
⚠ R6B4	CRT	103P392050	R-FUSE	1/2W 1.0K-J	28
⚠ R6B6	CRT	103P370050	R-FUSE	1/4W 22-J	28
⚠ R6B7	CRT	103P370010	R-FUSE	1/4W 10-J	28
⚠ R6B8	CRT	103P392050	R-FUSE	1/2W 1.0K-J	28
R921	MAIN	109D074010	R-CEMENT-METAL	5W 1.8K-K-OR-J	
⚠ R981	MAIN	109P913050	R-COMPOSITION	1/2W 6.8M-J	
⚠ R982	MAIN	109P913050	R-COMPOSITION	1/2W 6.8M-J	
R991	PWR-SUB	102P087040	R-CEMENT-WIRE	10W 4.7-K	
CAPACITORS					
C101	SAT	141P131050	C-CERAMIC-CHIP	CK50V 3300pF-K	BDS
C102	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
C103	SAT	141P131050	C-CERAMIC-CHIP	CK50V 3300pF-K	BDS
C105	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
C106	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C107	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C108	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C109	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C110	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C111	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
C112	SAT	154P332050	C-CERAMIC-CHIP	CK50C 39pF-J	BDS
C113	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
C114	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C115	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C116	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C118	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C119	SAT	141P135080	C-CERAMIC-CHIP	25V 0.1μF-Z	BDS
C121	SAT	141P137040	C-CERAMIC-CHIP	B50V 0.022μF-Z	BDS
C122	SAT	154P335010	C-CERAMIC-CHIP	CK50V 470pF-J	BDS
C123	SAT	141P137080	C-CERAMIC-CHIP	B50V 0.047μF-K	BDS
C124	SAT	141P130010	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C125	SAT	154P335010	C-CERAMIC-CHIP	CK50V 470pF-J	BDS
C126	SAT	141P132010	C-CERAMIC-CHIP	B50V 0.01μF-K	BDS

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
C127	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C128	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C129	SAT	154P332070	C-CERAMIC-CHIP	CK50C 47pF-J	BDS
C131	SAT	141P135080	C-CERAMIC-CHIP	25V 0.1μF-Z	BDS
C132	SAT	141P135000	C-CERAMIC-CHIP	25V 0.22μF-Z	BDS
C147	SAT	154P333010	C-CERAMIC-CHIP	CK50C 68pF-J	BDS
C152	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C153	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C157	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
C158	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
C159	SAT	154P331030	C-CERAMIC-CHIP	CK50V 12pF-J	BDS
C160	SAT	154P333050	C-CERAMIC-CHIP	CK50V 100pF-J	BDS
C161	SAT	154P332070	C-CERAMIC-CHIP	CK50C 47pF-J	BDS
C163	SAT	154P332090	C-CERAMIC-CHIP	CK50V 56pF-J	BDS
C166	SAT	154P331010	C-CERAMIC-CHIP	CH50V 10pF-C	BDS
C167	SAT	154P333070	C-CERAMIC-CHIP	CK50V 120pF-J	BDS
C169	SAT	154P332070	C-CERAMIC-CHIP	CK50C 47pF-J	BDS
C170	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C171	SAT	141P132010	C-CERAMIC-CHIP	B50V 0.01μF-K	BDS
C172	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C174	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C175	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C176	SAT	141P130010	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C177	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
C179	SAT	154P334030	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C181	SAT	141P132010	C-CERAMIC-CHIP	B50V 0.01μF-K	BDS
C182	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C193	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C194	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C195	SAT	141P130010	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C196	SAT	141P130030	C-CERAMIC-CHIP	CK50V 330pF-K	BDS
C197	SAT	154P331030	C-CERAMIC-CHIP	CK50V 12pF-J	BDS
C198	SAT	154P331030	C-CERAMIC-CHIP	CK50V 12pF-J	BDS
C199	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
C241	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C242	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C244	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C509	MAIN	172P171060	C-M-PLASTIC-PP	1600V 0.018μF-J	
C5A3	MAIN	172P942040	C-M-PLASTIC-PP	2000V 9100pF-J	
C5B1	MAIN	172P941010	C-M-PLASTIC-PP	2000V 3300pF-J	28
C5B3	MAIN	172P941030	C-M-PLASTIC-PP	2000V 3300 pF-J	25
C904	MAIN	185D059040	C-ELECTROLYTIC	385V/400V, 150μF-M	
⚠ C981	MAIN	189P091010	C-CERAMIC-AC	AC400V E4700pF-M	
⚠ C991	PWR-SUB	189P117030	C-M-POLYESTER-AC	AC275V 0.22μF-μF	
SWITCHES					
S701	MAIN	432P066010	SW-KEY-BOARD		
S702	MAIN	432P066030	SW-KEY-BOARD		
S703	MAIN	432P066030	SW-KEY-BOARD		
S704	MAIN	432P066030	SW-KEY-BOARD		

SYMBOL No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
S705	MAIN	432P066030	SW-KEY-BOARD		
⚠ S991	PWR-SUB	432C048010	SW-PUSH	AC250V 5A/80A	
SWA01	AUD-PWR	431C065020	SW-SLIDE	4-2 DC30V 1A NO	
MISCELLANEOUS					
CR5M1	MAIN	149P008010	CR-MULTIPLE	470P 3.6M-K	
⚠ F991	PWR-SUB	283D047040	FUSE	T2A	
J251	MAIN	452C080020	21 PIN-SCART	035-098-4505	
J252	MAIN	452C080020	21 PIN-SCART	035-098-4505	
J253	MAIN	449C090010	SOCKET-DIN-MINI	4P-SW-TSUKI	
J254	MAIN	440C269010	PI-JACK-BOARD	LPR6529-1400	
J353	BOLBY	MELP424010	SOCKET-DIN-SP		
J3A01	AUD-PWR	440C237020	TERMINAL-SP-8P		
J601	CRT	449C126010	CRT SOCKET		
⚠ PC951	MAIN	268P068010	PHOTO COUPLER	TCDT1124G	
RP991	PWR-SUB	265P071050	POSISTOR	PTH451C41BG180N	
SK100	SAT	451C129020	JACK-MICROPHONE	YKB21-5129	BDS
SP391		940B630001	ASSY-SPEAKER-SYSTEM	WITH WOOFER	28
SP391		940B630002	ASSY-SPEAKER-SYSTEM		25
SP392		940B630002	ASSY-SPEAKER-SYSTEM		
TU100	SAT	295P432010	TUNER-SAT	BSFK77G21	BDS
TU101	MAIN	295P430010	TUNER-TV	U1343/IEC	BD, BDS
TU101	MAIN	295P430020	TUNER-TV	UV1315/IEC	LD
X301	DOLBY	285P225010	QUARTZ-CRYSTAL	AT-51 18.432MHZ	
X3D1	DOLBY	MELX017010	QUARTZ-CRYSTAL	4MHZ	
X601	MAIN	285P142020	QUARTZ-CRYSTAL	17.734475MHZ	
X602	MAIN	285P143020	QUARTZ-CRYSTAL	14.31818MHZ	
X701	MAIN	285P139040	QUARTZ-CRYSTAL	12MHZ	
X7701	TEXT	285P157010	QUARTZ-CRYSTAL	27MHZ/SAA5246	
XT100	SAT	MELX017010	CRYSTAL	4MHz	BDS
XT101	SAT	285P139040	QUARTZ-CRYSTAL	12MHz	BDS
⚠ Z552	MAIN	299P193010	PROTECTOR	2000	
Z701	LED	939P580020	IR-PHOTO-MODULE	TFMK 5330	
⚠ Z951	MAIN	299P193010	PROTECTOR	2000	BD, LD
⚠ Z951	MAIN	299P193030	PROTECTOR	3150	BDS
⚠ Z952	MAIN	299P193070	PROTECTOR	5000	
⚠ Z953	MAIN	299P193000	PROTECTOR	1600	
⚠ Z968	MAIN	299P193000	PROTECTOR	1600	BDS
PCB ASSEMBLIES					
⚠		920A416001	ASSY-PWB-MAIN		28LD
⚠		920A416003	ASSY-PWB-MAIN		28BDS
⚠		920A416019	ASSY-PWB-MAIN		28BD
⚠		920A425001	ASSY-PWB-MAIN		25LD
⚠		920A425006	ASSY-PWB-MAIN		25BD
⚠		920A425013*	ASSY-PWB-MAIN	* see notes next page	*25BDS
⚠		H92D001005*	ASSY-PWB-MAIN	* see notes next page	*25BDS
⚠		930C899001	ASSY-PWB-VM/CRT		25BD, 25LD
⚠		930C899003	ASSY-PWB-VM/CRT		28BD, 28LD
⚠		930C899007	ASSY-PWB-VM/CRT		25BDS

* see notes next page

SYMBOL No PCB	PART No	PART NAME	DESCRIPTION	MODELS
⚠	930C899008	ASSY-PWB-VM/CRT		28BDS
⚠	930C900001	ASSY-PWB-POWER-SUB		
⚠	930C901001	ASSY-PWB-LED		
⚠	930C902010	ASSY-PWB-V/CRYPT	* see notes next page	BDS
⚠	930C903020*	ASSY-PWB-SAT	* see notes next page	*25BDS
⚠	930C903040*	ASSY-PWB-SAT	* see notes next page	*BDS
⚠	930C904004	ASSY-PWB-AUDIO-PWR		28
⚠	930C904006	ASSY-PWB-AUDIO-PWR		25
⚠	930C909001	ASSY-PWB-TEXT		
⚠	930C911002	ASSY-PWB-DOLBY		25BD, 25LD
⚠	930C911006	ASSY-PWB-DOLBY		28BDS
⚠	930C911007	ASSY-PWB-DOLBY		28BD, 28LD
⚠	930C911014	ASSY-PWB-DOLBY		25BDS
MECHANICAL AND COSMETIC				
⚠	246C162010	AC-POWER CORD/UK-PLUG		
	669D212040	SCREW 3x10 black	sp conns. / back cover fixing	
	669D218070	SCREW 5x30 sems	CRT fixing	
	669D220030	SCREW 3x10		
	669D221040	SCREW 4x12		
	669D221060	SCREW 4x16	back cover fixing	
⚠	700C600080	ASSY-BACK-COVER		25BD
⚠	700C600090	ASSY-BACK-COVER		25BDS
⚠	700C601020	ASSY-BACK-COVER		25LD
⚠	700C604050	ASSY-BACK-COVER		28BD
⚠	700C604060	ASSY-BACK-COVER		28BDS
⚠	700C604080	ASSY-BACKCOVER		28LD
	701D602080	ASSY-CABINET		25BD
	701D602090	ASSY-CABINET		25BDS
	701D604020	ASSY-CABINET		25LD
	701D605080	ASSY-CABINET		28BD
	701D605090	ASSY-CABINET		28BDS
	701D607020	ASSY-CABINET		28LD
	752C600090	ASSY-DOOR-SAT		25BD/LD
	752C601000	ASSY-DOOR-SAT		25BDS
	752C602000	ASSY-DOOR-SAT		28LD
	752C602030	ASSY-DOOR-SAT		28BDS
	752C602090	ASSY-DOOR-SAT		28BD
	752C603000	ASSY-DOOR-CONTROL		25
	752C603030	ASSY-DOOR-CONTROL		28
	754C600030	ASSY BUTTON POWER		25
	754C600050	ASSY-BUTTON POWER		28
	761C573010	DOOR-CATCH	for openable doors	
	761C550010	DOOR-CLIP	for fixed (Card reader) door	BD, LD
	244D279010	SPEAKER CABLE (PAIR)	for rear surround speakers	
	290P054070	TRANS-REMOCON		
	801C280010	PACKING-CASE		28
	801C280020	PACKING-CASE		25
	803A400010	CUSHION-SET		28
	803A401010	CUSHION-SET		25

SYMBOL No PCB	PART No	PART NAME	DESCRIPTION	MODELS
	831D296030	PACKING-BAG		25
	831D296040	PACKING-BAG		28
	871C601030	SERVICE MANUAL		
	872C123020	IB-COLOUR		LD
	872C123040	IB-COLOUR		BDS
	872C124000	IB-COLOUR		BD
	770B217010	UNIT-DOLBY-STAND	INC. rear & centre speakers	28
	770B217020	UNIT-DOLBY-STAND	INC. rear & centre speakers	25
	770B217030	UNIT-DOLBY-STAND	WITHOUT speakers	28
	770B217040	UNIT-DOLBY-STAND	WITHOUT speakers	25
	926P035020	SPEAKER-SYSTEM	rear speaker (single)	
	H48P001010	SPEAKER-SYSTEM	centre speaker (in stand)	
	999D161010	SAT-LINK-LEAD		BDS

NOTES

For CT-25AV1BDS only you *must* order the correct part numbers for **Assy PCB Main** and **Assy PCB Satellite** depending on the Serial number:

Serial Number	Assy PCB Main	Assy PCB Satellite
000001 ~ 000500	H92D001005	930C903020
000501 ~ onwards	920A425013	930C903040

Do not order these 2 parts using the numbers listed on the card inside the TV.

VideoCrypt Decoder

The VideoCrypt decoder PBC is only serviceable by Mitsubishi service department.

In the event of a fault on this PCB, please follow this procedure:

1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

Failure to return the PCB within 30 days will incur full replacement PCB costs.

NB

The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.

7 SCHEMATIC DIAGRAMS

7.1 SERVICING PRECAUTIONS

The ⚠ symbol indicates components with characteristics critical to safety and performance.

These parts **must** only be replaced with parts having identical values and characteristics – refer to the Service Parts List for the correct Mitsubishi part numbers.

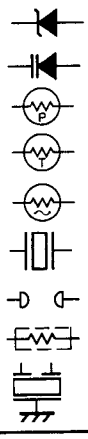
Do not compromise the safety of the receiver by improper servicing.

7.2 GENERAL NOTES

- DC voltages are measured from the points indicated to circuit ground.
- Waveforms are for a PAL colour bar signal.
- Test Points are shown as: "TP6A", etc.
- This is a basic circuit diagram – receivers are subject to modification due to continuous engineering improvement.

7.3 COMPONENT INFORMATION

SPECIFIC SYMBOLS



Zener diode
Varicap
Posistor
Thermistor
Fusible resistor
Crystal
Air gap
Part (e.g. resistor) on copper side of PCB
Ceramic filter

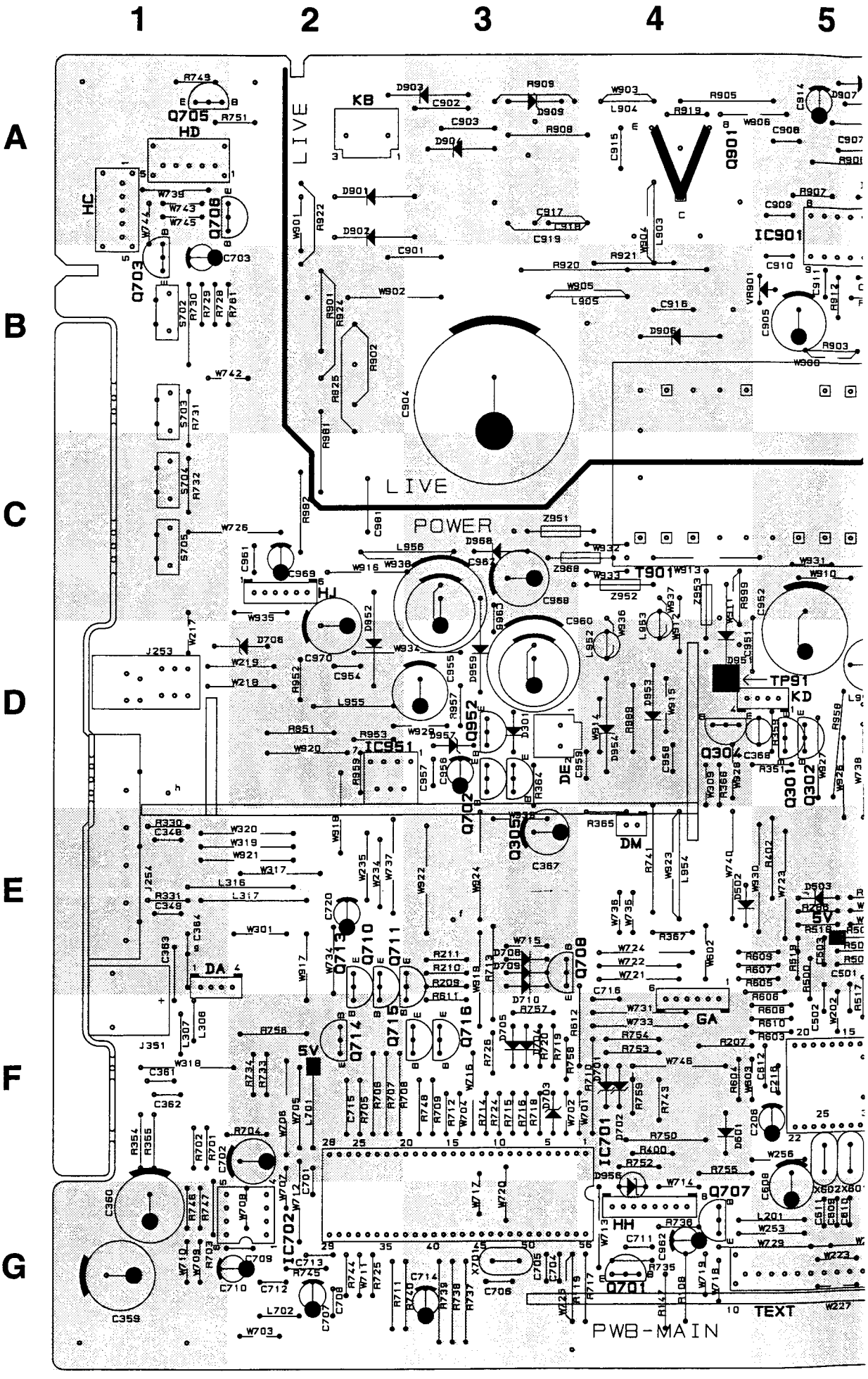
RESISTORS

Value	without spec.	Ω, K = KΩ, M = MΩ
Wattage	without spec.	1/4W or 1/6W (chips: 1/10W)
Tolerance	without spec.	±5%
	D = ±0.5%, F = ±1%, J = ±5%, K = ±10%,	
Type	without spec.	Carbon film
	(S)	Composition
	(MB)	Metal oxide film
	(CE)	Cemented
	(W)	Wire wound
	(M)	Metal film
	(MPC)	Metal plate cement
	(ML)	Metal linear

CAPACITORS

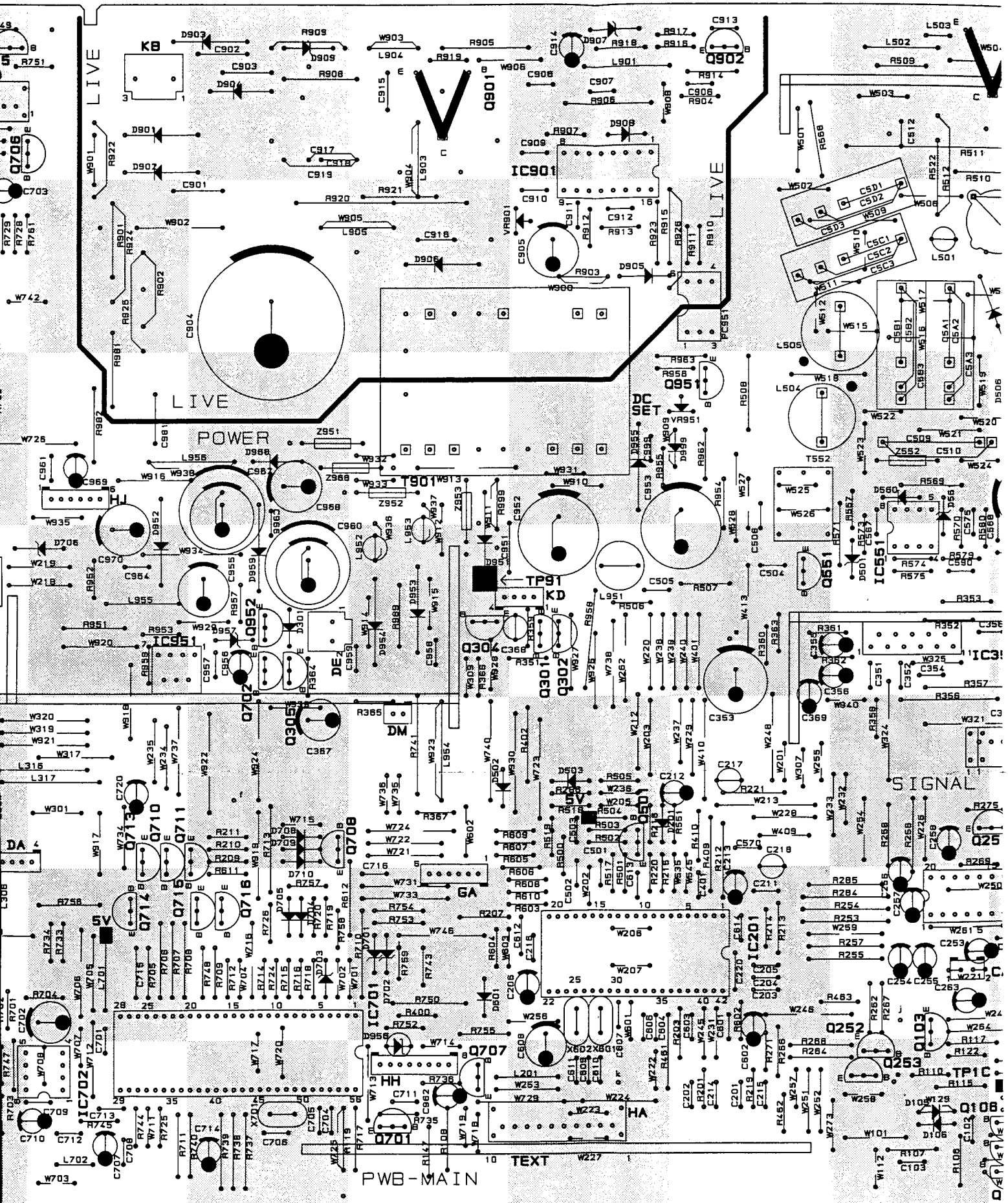
Value	without spec.	pF for values >1, µF for values <1
Voltage	without spec.	50V
Tolerance	without spec.	electrolytic: ±20%, others ±10%
	G = ±2%, J = ±5%, K = ±10%, M = ±20%, P = +100 –0%, Z = +80 –20%, Q = +30 –10%, T = +200 –0%, C = ±0.25pF, D = ±0.5, F = ± 1pF, G = ±2pF	
Type	without spec.	Ceramic
	(MF)	Polyester
	(PP)	Polypropylene film
	(ALM)	Aluminus electrolytic
	(TF)	Twin film
	(SC)	Semiconductor ceramic
	(MP)	Metalised paper
	(MPP)	Metalised plastic film
	(MMF)	Metalised polyester
	(MF.PP)	Polyester/polypropylene film
	(PS)	Polystyrene (styrol)
	(TAN) or (TANT)	Tantalum
	+N—	Electrolytic
	(BP) or (NP)	Non-polarised electrolytic
Characteristic	(only ceramic capacitors)	
	without spec.	B or F (high dielectric)
	CH, SL, etc.	Temperature compensating types

PCB-MAIN (AV1 series)

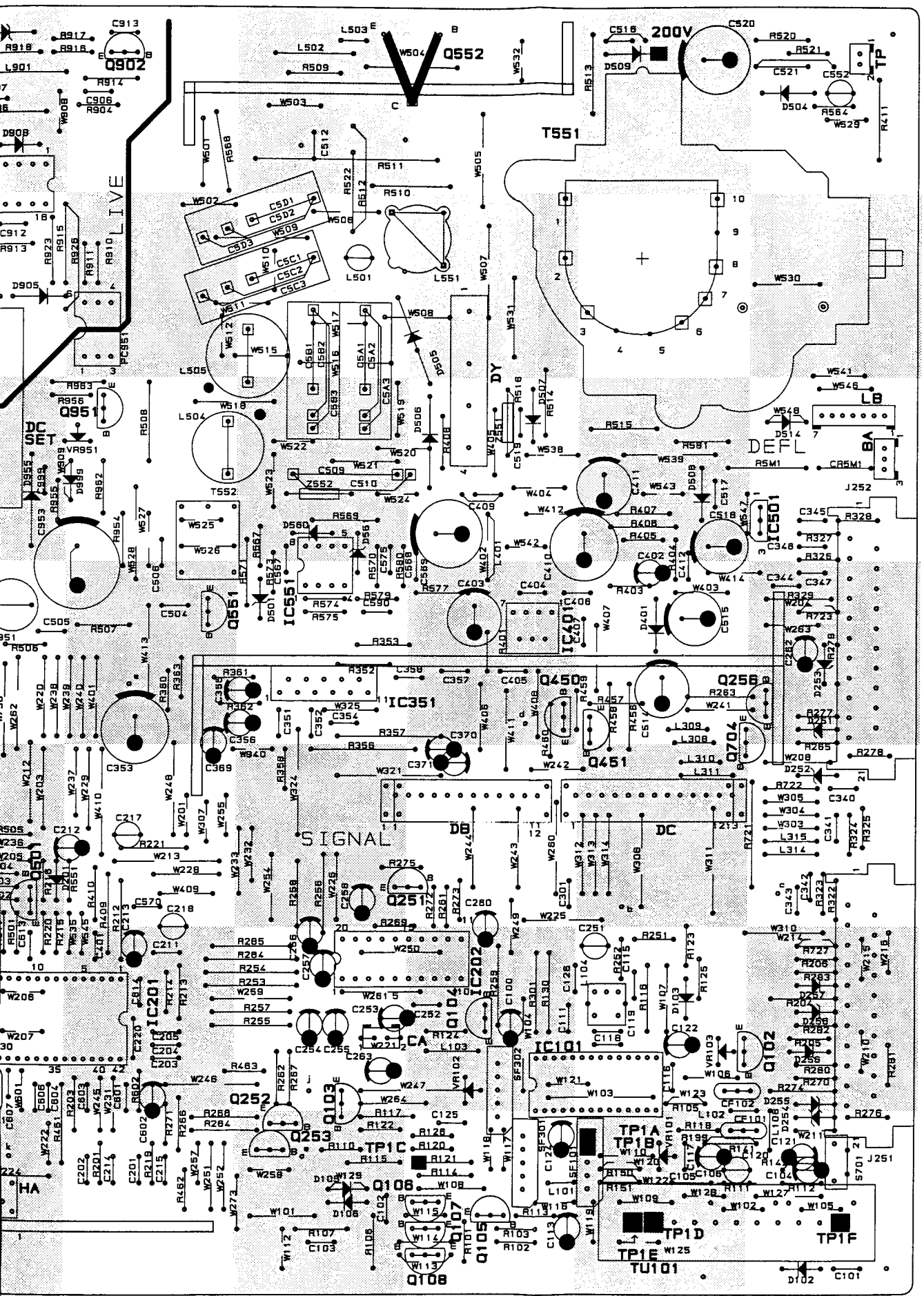


(AV1 series)

2 3 4 5 6 7



2 3 4 5 6 7


6
7
8
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A
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C
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G
LIVE
SIGNAL
DEFL
T551
T552
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IC501
IC401
IC351
IC201
IC202
IC101
Q902
Q552
Q951
Q551
Q450
Q451
Q256
Q704
Q650
Q251
Q104
Q252
Q253
Q103
Q106
Q107
Q105
Q108
Q102
DY
DB
DC
CA
HA
LB
BA
TP
TP1A
TP1B
TP1C
TP1D
TP1E
TP1F
TU101
200V
DC SET
VR951
J252
J251

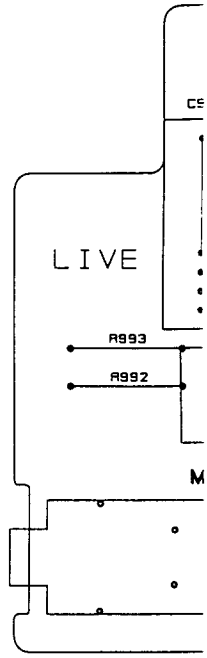
MAIN PCB COMPONENT ADDRESSES

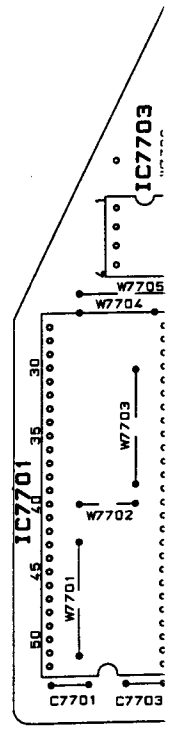
C509	C7
C5A1	B7
C5A2	B7
C5A3	C7
C5B1	B7
C5B2	B7
C5B3	C7
C5C1	B7
C5C2	B7
C5C3	B7
C5D1	B7
C5D2	B7
C5D3	B6
C904	B3
C981	C2
CF101	G9
CF102	F9
CR5M1	C10
D102	G10
D103	F9
D105	G7
D106	G7
D201	E6
D251	D10
D252	E10
D253	D10
D254	G10
D255	F10
D256	F10
D257	F10
D258	F10
D301	D3
D401	D9
D501	D7
D502	E4
D503	E5
D504	A10
D505	B9
D506	C8
D507	C8
D508	C9
D509	A9
D514	C10
D560	C7
D561	C7
D601	F4
D701	F4
D702	F4
D703	F3
D704	F3
D705	F3
D706	D2

D708	E3
D709	E3
D710	E3
D901	A2
D902	A2
D903	A3
D904	A3
D905	B5
D906	B4
D907	A5
D908	A5
D909	A3
D951	D4
D952	D2
D953	D4
D954	D4
D955	C5
D956	G4
D957	D3
D959	D3
D968	C3
D999	C6
IC101	F9
IC201	F6
IC202	F8
IC351	D7
IC401	D8
IC501	C10
IC551	D7
IC701	F4
IC702	G2
IC901	A5
IC951	D2
J251	G10
J252	C10
J253	D1
J254	E1
J351	F1
L101	G8
L102	G9
L103	F8
L104	F9
L106	G10
L201	G5
L306	F1
L307	F1
L308	D9
L309	D9
L310	E9
L311	E9
L314	E10
L315	E10

L316	E2
L317	E2
L401	C8
L501	B7
L502	A7
L503	A7
L504	C6
L505	B6
L551	B8
L701	F2
L702	G2
L901	A5
L903	A4
L904	A4
L905	B4
L951	D5
L952	D4
L953	D4
L954	E4
L955	D2
L956	C3
PC951	B6
Q102	F10
Q103	F7
Q104	F8
Q105	G8
Q106	G8
Q107	G8
Q108	G7
Q251	E8
Q252	G7
Q253	G7
Q256	D10
Q301	D5
Q302	D5
Q304	D4
Q305	D3
Q450	D8
Q451	D9
Q501	E5
Q551	D6
Q552	A8
Q701	G4
Q702	D3
Q703	B1
Q704	D10
Q705	A1
Q706	A1
Q707	G4
Q708	E3
Q710	E2
Q711	E2

Q713	E2
Q714	F2
Q715	F3
Q716	F3
Q901	A4
Q902	A6
Q951	C6
Q952	D3
R352	D7
R353	D7
R406	C9
R508	C6
R511	A7
R512	A7
R513	A9
R514	C8
R516	C8
R573	D7
R574	D7
R575	D7
R5M1	C10
R921	B4
R954	C6
R955	C5
R981	C2
R982	C2
S701	G10
S702	B1
S703	B1
S704	C1
S705	C1
SF101	G9
SF301	G8
SF302	F8
T551	A8
T552	C6
T901	C4
TU101	G9
VR101	G9
VR102	F8
VR103	F9
VR901	B5
VR951	C6
X601	F5
X602	F5
X701	G3
Z551	C8
Z552	C7
Z951	C3
Z952	C4
Z953	C4
Z968	C3



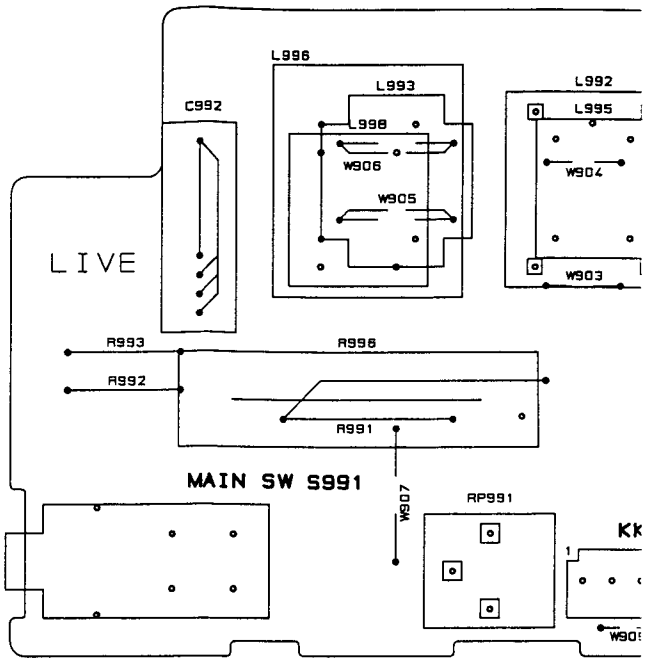


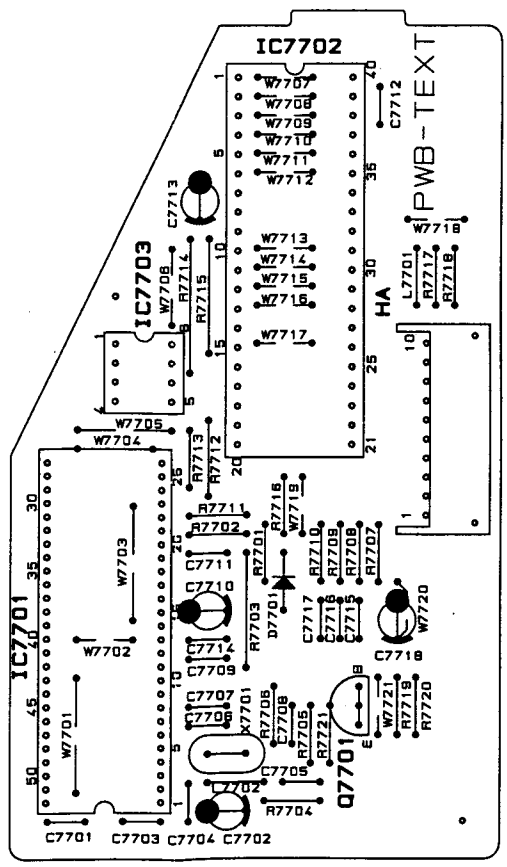
OMPONENT ADDRESSES

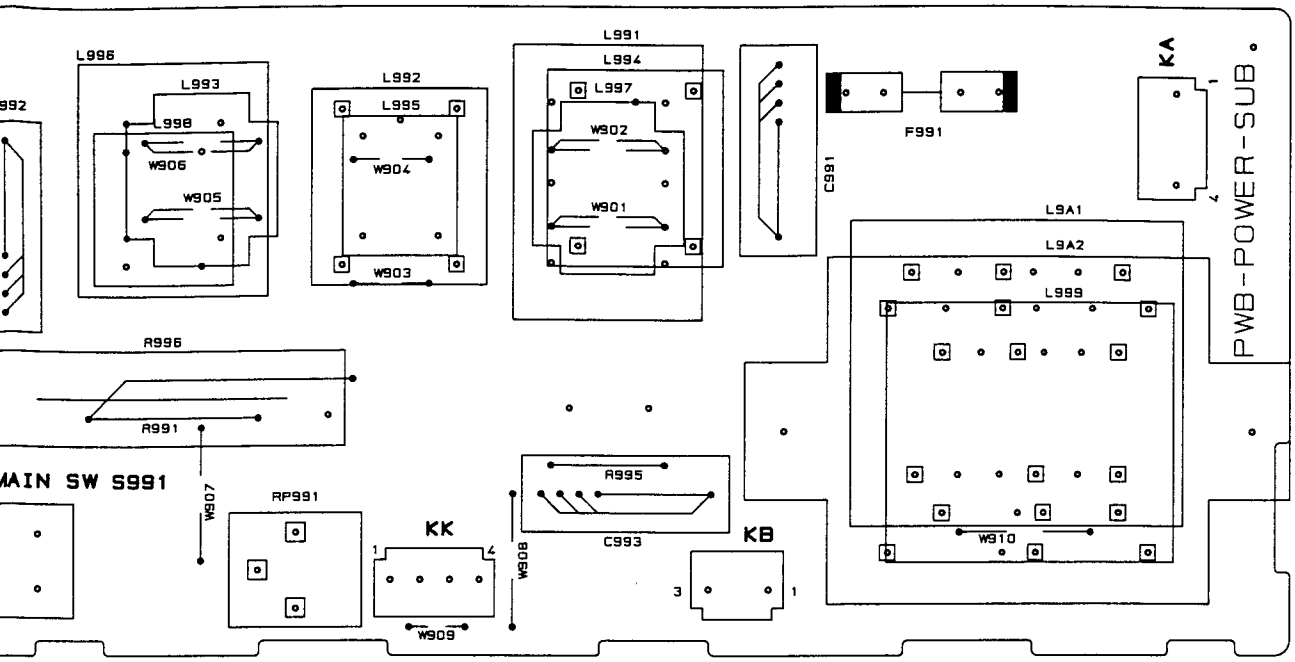
D708	E3
D709	E3
D710	E3
D901	A2
D902	A2
D903	A3
D904	A3
D905	B5
D906	B4
D907	A5
D908	A5
D909	A3
D951	D4
D952	D2
D953	D4
D954	D4
D955	C5
D956	G4
D957	D3
D959	D3
D968	C3
D999	C6
IC101	F9
IC201	F6
IC202	F8
IC351	D7
C401	D8
C501	C10
C551	D7
C701	F4
C702	G2
C901	A5
C951	D2
J251	G10
J252	C10
J253	D1
J254	E1
J351	F1
L101	G8
L102	G9
L103	F8
L104	F9
L106	G10
L201	G5
L306	F1
L307	F1
L308	D9
L309	D9
L310	E9
L311	E9
L314	E10
L315	E10

L316	E2
L317	E2
L401	C8
L501	B7
L502	A7
L503	A7
L504	C6
L505	B6
L551	B8
L701	F2
L702	G2
L901	A5
L903	A4
L904	A4
L905	B4
L951	D5
L952	D4
L953	D4
L954	E4
L955	D2
L956	C3
PC951	B6
Q102	F10
Q103	F7
Q104	F8
Q105	G8
Q106	G8
Q107	G8
Q108	G7
Q251	E8
Q252	G7
Q253	G7
Q256	D10
Q301	D5
Q302	D5
Q304	D4
Q305	D3
Q450	D8
Q451	D9
Q501	E5
Q551	D6
Q552	A8
Q701	G4
Q702	D3
Q703	B1
Q704	D10
Q705	A1
Q706	A1
Q707	G4
Q708	E3
Q710	E2
Q711	E2

Q713	E2
Q714	F2
Q715	F3
Q716	F3
Q901	A4
Q902	A6
Q951	C6
Q952	D3
R352	D7
R353	D7
R406	C9
R508	C6
R511	A7
R512	A7
R513	A9
R514	C8
R516	C8
R573	D7
R574	D7
R575	D7
R5M1	C10
R921	B4
R954	C6
R955	C5
R981	C2
R982	C2
S701	G10
S702	B1
S703	B1
S704	C1
S705	C1
SF101	G9
SF301	G8
SF302	F8
T551	A8
T552	C6
T901	C4
TU101	G9
VR101	G9
VR102	F8
VR103	F9
VR901	B5
VR951	C6
X601	F5
X602	F5
X701	G3
Z551	C8
Z552	C7
Z951	C3
Z952	C4
Z953	C4
Z968	C3

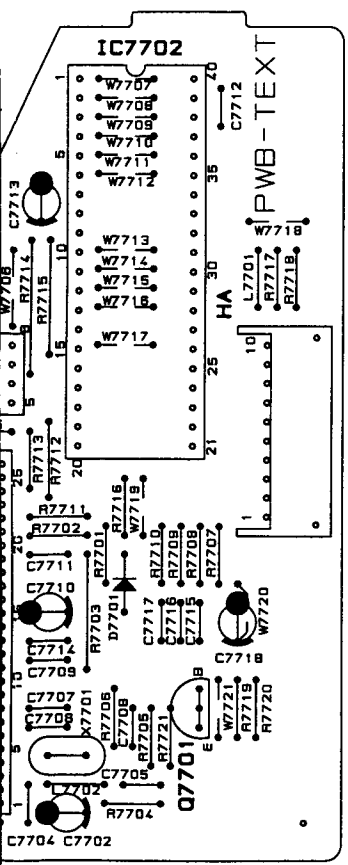






PCB POWER SUB

- C991
- C993
- F991
- L991
- L992
- L993
- L994
- L995
- L996
- L997
- L998
- R991
- R992
- R993
- RP991
- S991

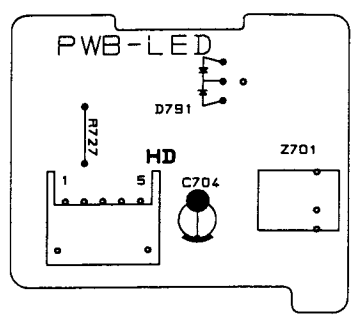


PCB TEXT

- IC7701
- IC7702
- Q7701
- D7701
- L7701
- L7702
- X7701

PCB LED

- D791
- Z701



PCB-SAT COMPONENT ADDRESSES

C101	D4
C102	C4
C103	C4
C104	D4
C105	C3
C106	D3
C107	D4
C108	D3
C109	D3
C110	D3
C111	D3
C112	D2
C113	D2
C114	E3
C115	D2
C116	E3
C117	D3
C118	E3
C119	D3
C120	E3
C121	E3
C122	F3
C123	E3
C124	F3
C125	F4
C126	E3
C127	D4
C128	E3
C129	E4
C130	D5
C131	E4
C132	E5
C133	G3
C134	H3
C135	H2
C136	H1
C137	H2
C138	J2
C139	H1
C140	J3
C141	J2
C142	H1
C143	H1
C144	J2
C145	J2
C146	F5
C147	G4
C148	F5
C149	A4
C151	B5
C152	B5
C153	B5
C154	B5
C155	E5

C156	E5
C157	E5
C158	F5
C159	F4
C160	G5
C161	G5
C162	G5
C163	G4
C164	F4
C165	G5
C166	G4
C167	G3
C168	G4
C169	G3
C170	G3
C171	F4
C172	E2
C174	G3
C175	F3
C176	E2
C177	E2
C178	E3
C179	F4
C180	F4
C181	A4
C182	A5
C183	C5
C189	G3
C192	D5
C193	J3
C194	J3
C195	E1
C196	E1
C197	D3
C198	D3
C199	F4
C241	C4
C242	C3
C243	H3
C244	H3
D100	D3
D101	D3
D102	D3
D103	D3
D109	C4
D110	C4
D111	F1
D112	F1
D113	E1
IC100	E4
IC101	G1
IC102	H2
IC103	B5
IC104	C4

IC105	F2
IC106	E2
IC107	D2
IC108	A5
IC109	C3
L100	D3
L101	D2
L102	F5
L103	G4
L104	F5
L105	F4
L106	F4
Q102	D1
Q103	F3
Q104	G3
Q105	H3
Q106	J3
Q107	J3
Q108	G5
Q109	B4
Q110	B4
Q111	B4
Q112	B4
Q113	F5
Q114	F4
Q115	F3
Q116	F1
Q117	F1
Q118	G1
Q119	G1
Q120	F4
Q121	A4
Q122	A4
Q123	A4
Q124	C2
Q125	C3
Q126	C3
Q127	C5
Q128	C5
Q129	B3
Q130	B3
Q131	B3
Q132	B3
Q135	E1
Q136	J3
Q137	G1
Q138	G1
Q139	H3
R108	E1
R109	E1
R110	D1
R111	D4
R112	C4
R113	C4

R114	C4
R115	C3
R116	C3
R117	D3
R118	C3
R119	D2
R120	D3
R121	E3
R122	E2
R123	E2
R125	E3
R126	E3
R127	E3
R128	F3
R129	F3
R130	F3
R131	F4
R132	F4
R133	D4
R134	D4
R135	E3
R136	E4
R137	D5
R138	D5
R139	E5
R140	E5
R141	E5
R142	H1
R143	J1
R144	G3
R145	G3
R146	H2
R147	H2
R148	G1
R149	G1
R150	H1
R151	H1
R152	H1
R153	J1
R154	H1
R155	H2
R156	H1
R157	J1
R158	H3
R159	J4
R160	J2
R161	J2
R162	J2
R163	H2
R164	H1
R165	H1
R166	J1
R167	J1
R168	G4

R169	H4
R170	G4
R171	G5
R172	B4
R173	B4
R174	A5
R175	A5
R176	A5
R177	A3
R178	B4
R179	B4
R180	B4
R181	B4
R183	E5
R184	E5
R185	E5
R186	E5
R187	F5
R189	G4
R190	G4
R191	G3
R192	G3
R193	G3
R194	F1
R195	F1
R196	G1
R197	G1
R199	F1
R200	E2
R201	E1
R203	E2
R204	G1
R206	G1
R207	G1
R208	G1
R209	F2
R210	F2
R211	F2
R212	G1
R213	G2
R214	G3
R215	F3
R216	F3
R217	G3
R218	E3
R219	F3
R220	E2
R221	E2
R222	D2
R223	D2
R224	F4
R225	F4
R226	F4
R227	F4

OMPONENT ADDRESSES

C156	E5
C157	E5
C158	F5
C159	F4
C160	G5
C161	G5
C162	G5
C163	G4
C164	F4
C165	G5
C166	G4
C167	G3
C168	G4
C169	G3
C170	G3
C171	F4
C172	E2
C174	G3
C175	F3
C176	E2
C177	E2
C178	E3
C179	F4
C180	F4
C181	A4
C182	A5
C183	C5
C189	G3
C192	D5
C193	J3
C194	J3
C195	E1
C196	E1
C197	D3
C198	D3
C199	F4
C241	C4
C242	C3
C243	H3
C244	H3
D100	D3
D101	D3
D102	D3
D103	D3
D109	C4
D110	C4
D111	F1
D112	F1
D113	E1
IC100	E4
IC101	G1
IC102	H2
IC103	B5
IC104	C4

IC105	F2
IC106	E2
IC107	D2
IC108	A5
IC109	C3
L100	D3
L101	D2
L102	F5
L103	G4
L104	F5
L105	F4
L106	F4
Q102	D1
Q103	F3
Q104	G3
Q105	H3
Q106	J3
Q107	J3
Q108	G5
Q109	B4
Q110	B4
Q111	B4
Q112	B4
Q113	F5
Q114	F4
Q115	F3
Q116	F1
Q117	F1
Q118	G1
Q119	G1
Q120	F4
Q121	A4
Q122	A4
Q123	A4
Q124	C2
Q125	C3
Q126	C3
Q127	C5
Q128	C5
Q129	B3
Q130	B3
Q131	B3
Q132	B3
Q135	E1
Q136	J3
Q137	G1
Q138	G1
Q139	H3
R108	E1
R109	E1
R110	D1
R111	D4
R112	C4
R113	C4

R114	C4
R115	C3
R116	C3
R117	D3
R118	C3
R119	D2
R120	D3
R121	E3
R122	E2
R123	E2
R125	E3
R126	E3
R127	E3
R128	F3
R129	F3
R130	F3
R131	F4
R132	F4
R133	D4
R134	D4
R135	E3
R136	E4
R137	D5
R138	D5
R139	E5
R140	E5
R141	E5
R142	H1
R143	J1
R144	G3
R145	G3
R146	H2
R147	H2
R148	G1
R149	G1
R150	H1
R151	H1
R152	H1
R153	J1
R154	H1
R155	H2
R156	H1
R157	J1
R158	H3
R159	J4
R160	J2
R161	J2
R162	J2
R163	H2
R164	H1
R165	H1
R166	J1
R167	J1
R168	G4

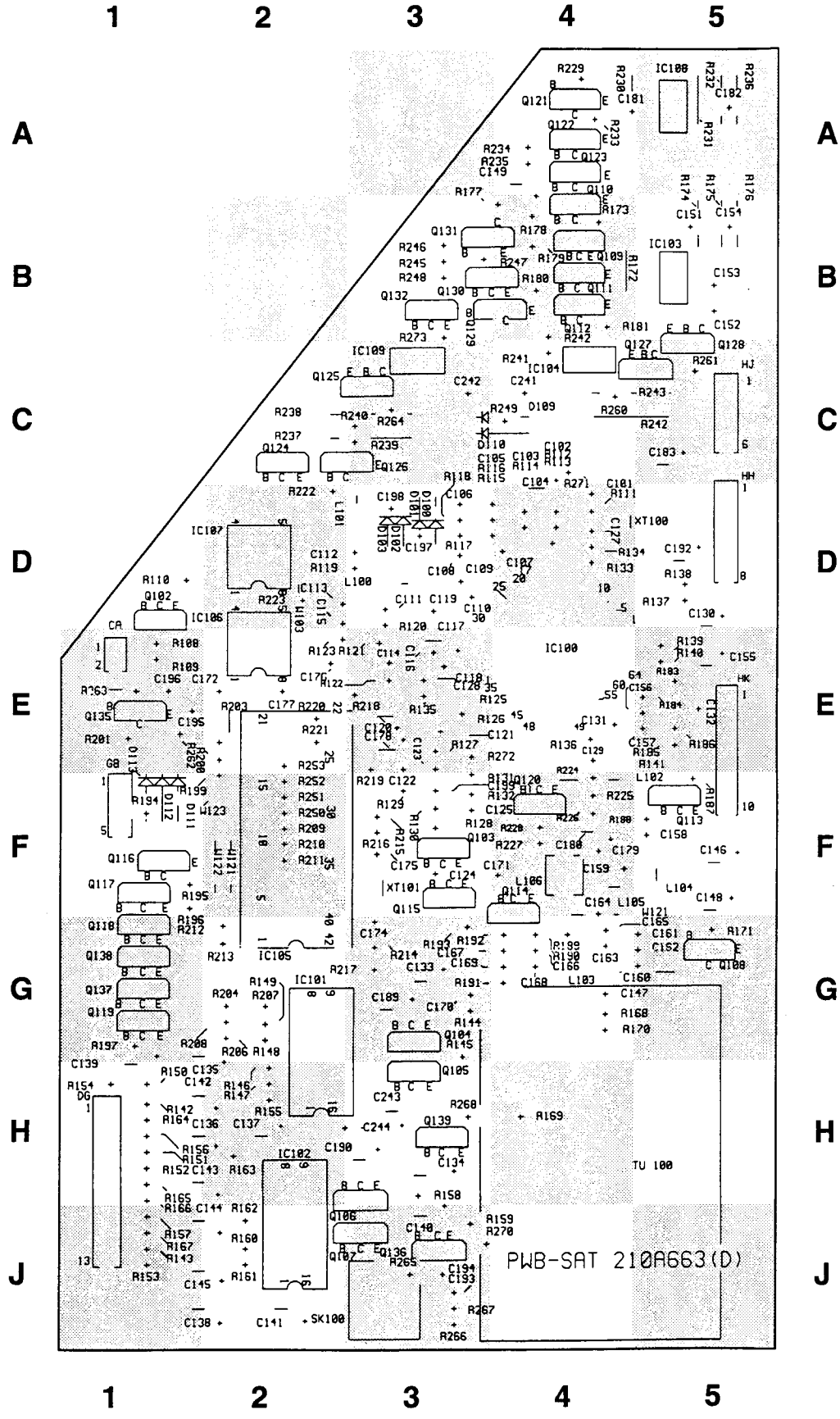
R169	H4
R170	G4
R171	G5
R172	B4
R173	B4
R174	A5
R175	A5
R176	A5
R177	A3
R178	B4
R179	B4
R180	B4
R181	B4
R183	E5
R184	E5
R185	E5
R186	E5
R187	F5
R189	G4
R190	G4
R191	G3
R192	G3
R193	G3
R194	F1
R195	F1
R196	G1
R197	G1
R199	F1
R200	E2
R201	E1
R203	E2
R204	G1
R206	G1
R207	G1
R208	G1
R209	F2
R210	F2
R211	F2
R212	G1
R213	G2
R214	G3
R215	F3
R216	F3
R217	G3
R218	E3
R219	F3
R220	E2
R221	E2
R222	D2
R223	D2
R224	F4
R225	F4
R226	F4
R227	F4

R228	F4
R229	A4
R230	A4
R231	A5
R232	A5
R233	A4
R234	A4
R235	A4
R236	A5
R237	C2
R238	C2
R239	C3
R240	C3
R241	C4
R242	C5
R243	C5
R244	B4
R245	B3
R246	B3
R247	B4
R248	B3
R249	C4
R250	F2
R251	F2
R252	F2
R253	E2
R260	C4
R261	C5
R262	E1
R263	E1
R264	C3
R265	J3
R266	J3
R267	J3
R268	H3
R270	J4
R271	D4
R272	E4
R273	B3
SK100	J3
TU100	H4
XT100	D5
XT101	F3

A
B
C
D
E
F
G
H
J

PCB-SAT

R228	F4
R229	A4
R230	A4
R231	A5
R232	A5
R233	A4
R234	A4
R235	A4
R236	A5
R237	C2
R238	C2
R239	C3
R240	C3
R241	C4
R242	C5
R243	C5
R244	B4
R245	B3
R246	B3
R247	B4
R248	B3
R249	C4
R250	F2
R251	F2
R252	F2
R253	E2
R260	C4
R261	C5
R262	E1
R263	E1
R264	C3
R265	J3
R266	J3
R267	J3
R268	H3
R270	J4
R271	D4
R272	E4
R273	B3
SK100	J3
TU100	H4
XT100	D5
XT101	F3



PCB DOLBY ADDRESSES

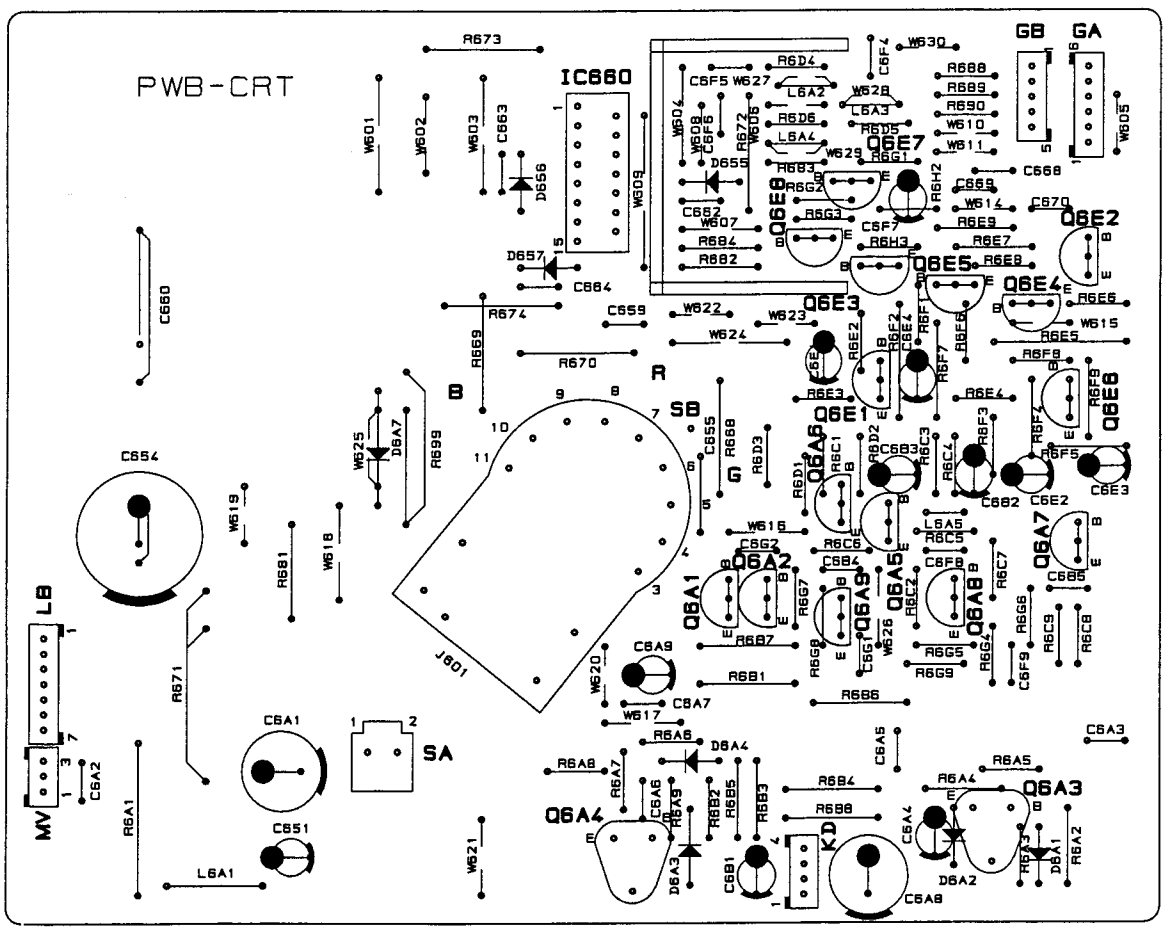
D302	D5
D303	F3
D304	D3
D3D1	C2
D3D2	D2
D3D3	C2
D3D4	C3
IC301	E4
IC3D1	C5
IC3D2	B5
IC3D3	C3
IC3D4	D1
IC3D5	B3
IC3D6	A4
IC3D7	A5
IC3D8	B4
IC3D9	D2
L301	E1
L302	F2
L303	D3

L303	D5
L304	E5
L305	E5
L308	F3
L309	F3
L311	F4
L320	E5
L3D1	C2
L3D10	A3
L3D11	B2
L3D12	D1
L3D2	D4
L3D4	B4
L3D5	B4
L3D6	C6
L3D7	C2
L3D8	D1
L3D9	D1
Q302	E4
Q303	D4

Q304	E5
Q305	D5
Q306	D5
Q307	E2
Q308	E2
Q3D1	C2
Q3D10	E1
Q3D11	E1
Q3D12	E1
Q3D2	D3
Q3D3	C3
Q3D4	A5
Q3D5	A6
Q3D6	B3
Q3D7	A6
Q3D8	C4
Q3D9	D1
X301	F4
X3D1	D3

PCB CRT

D655	Q6A4
D656	Q6A5
D657	Q6A6
IC660	Q6A7
J601	Q6A8
R671	Q6A9
D6A1	Q6E1
D6A2	Q6E2
D6A3	Q6E3
D6A4	Q6E4
D6A7	Q6E5
L6A1	Q6E6
L6A2	Q6E7
L6A3	Q6E8
L6A4	R6B4
L6A5	R6B6
Q6A1	R6B7
Q6A2	R6B8
Q6A3	

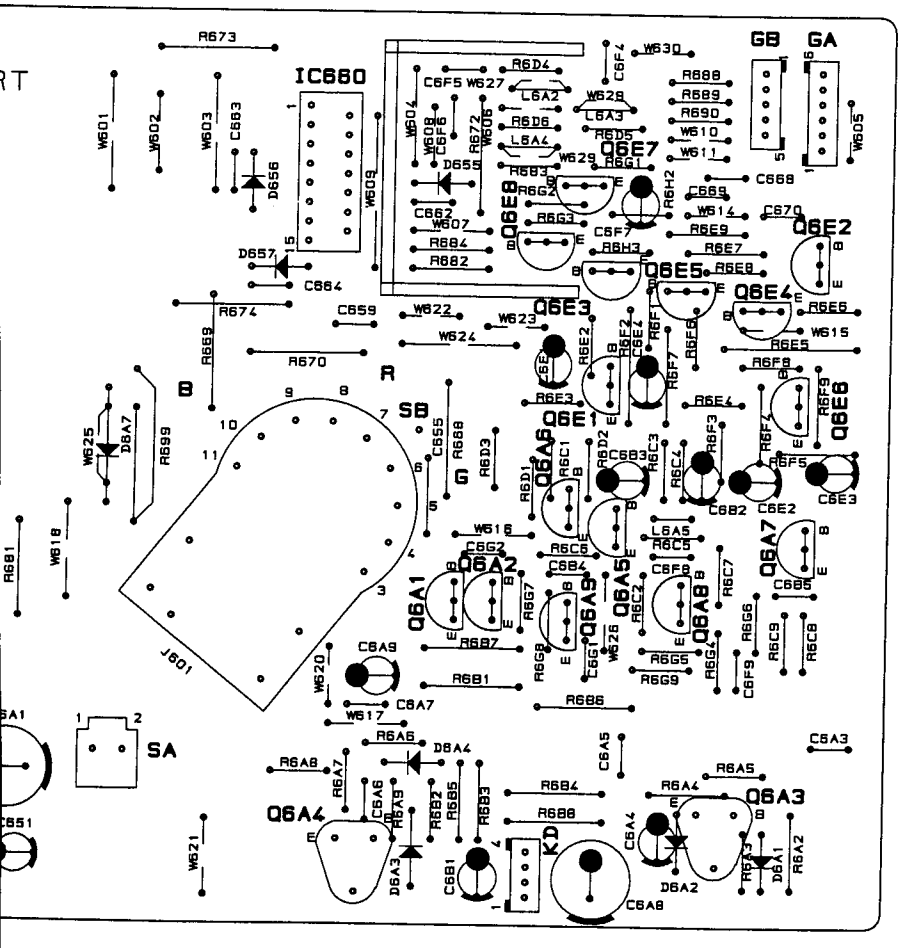


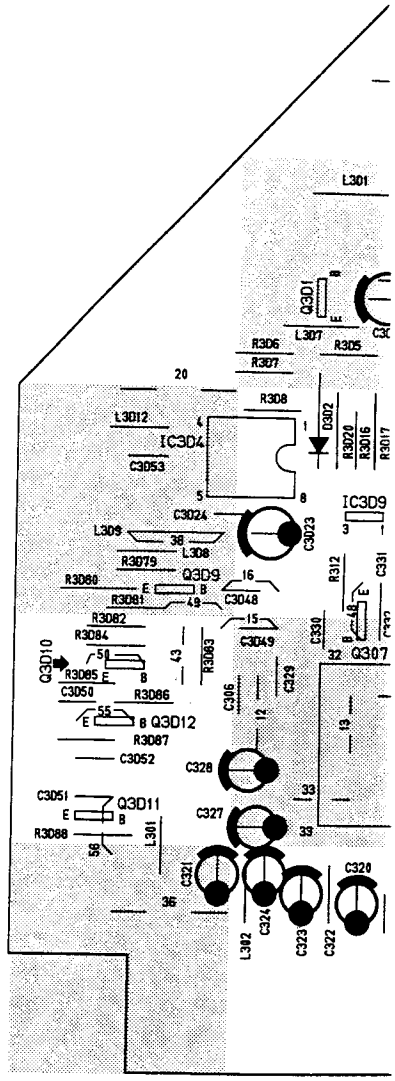
PCB DOLBY ADDRESSES

D302	D5
D303	F3
D304	D3
D3D1	C2
D3D2	D2
D3D3	C2
D3D4	C3
IC301	E4
IC3D1	C5
IC3D2	B5
IC3D3	C3
IC3D4	D1
IC3D5	B3
IC3D6	A4
IC3D7	A5
IC3D8	B4
IC3D9	D2
L301	E1
L302	F2
L303	D3

L303	D5
L304	E5
L305	E5
L308	F3
L309	F3
L311	F4
L320	E5
L3D1	C2
L3D10	A3
L3D11	B2
L3D12	D1
L3D2	D4
L3D4	B4
L3D5	B4
L3D6	C6
L3D7	C2
L3D8	D1
L3D9	D1
Q302	E4
Q303	D4

Q304	E5
Q305	D5
Q306	D5
Q307	E2
Q308	E2
Q3D1	C2
Q3D10	E1
Q3D11	E1
Q3D12	E1
Q3D2	D3
Q3D3	C3
Q3D4	A5
Q3D5	A6
Q3D6	B3
Q3D7	A6
Q3D8	C4
Q3D9	D1
X301	F4
X3D1	D3





1
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A
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C
D
E
F
IC3D5
IC3D6
IC3D7
IC3D8
IC3D2
IC3D3
IC3D1
IC3D4
IC3D9
IC301
Q3D1
Q3D2
Q3D3
Q3D4
Q3D5
Q3D6
Q3D7
Q3D8
Q3D9
Q3D10
Q3D11
Q3D12
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Q304
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DOLBY
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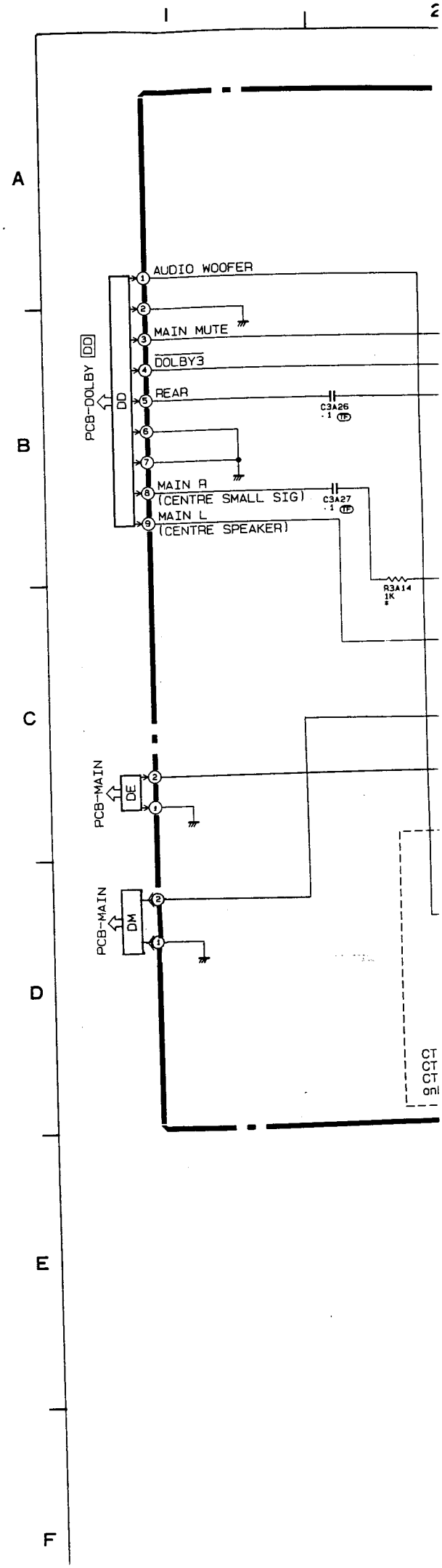
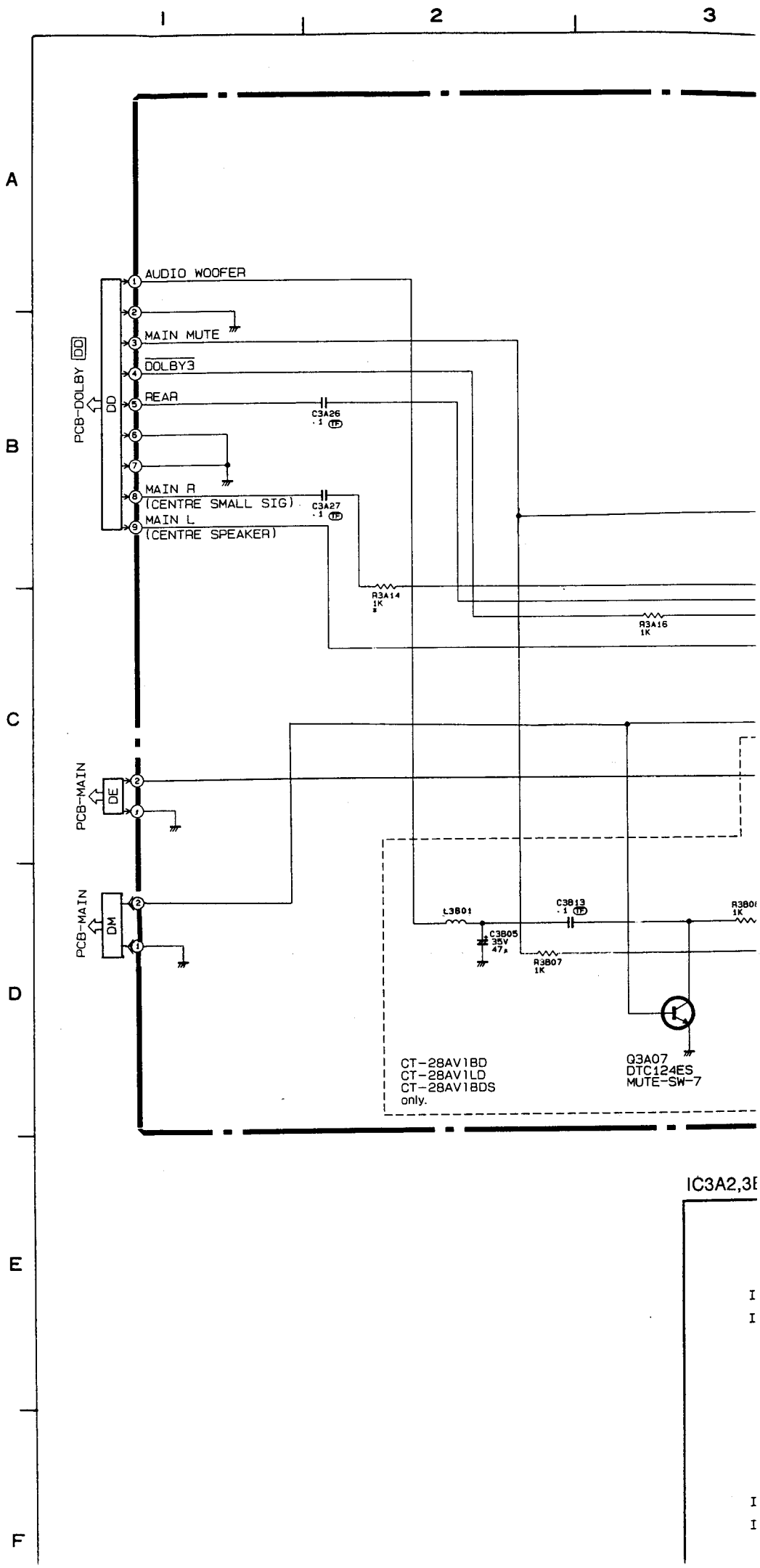
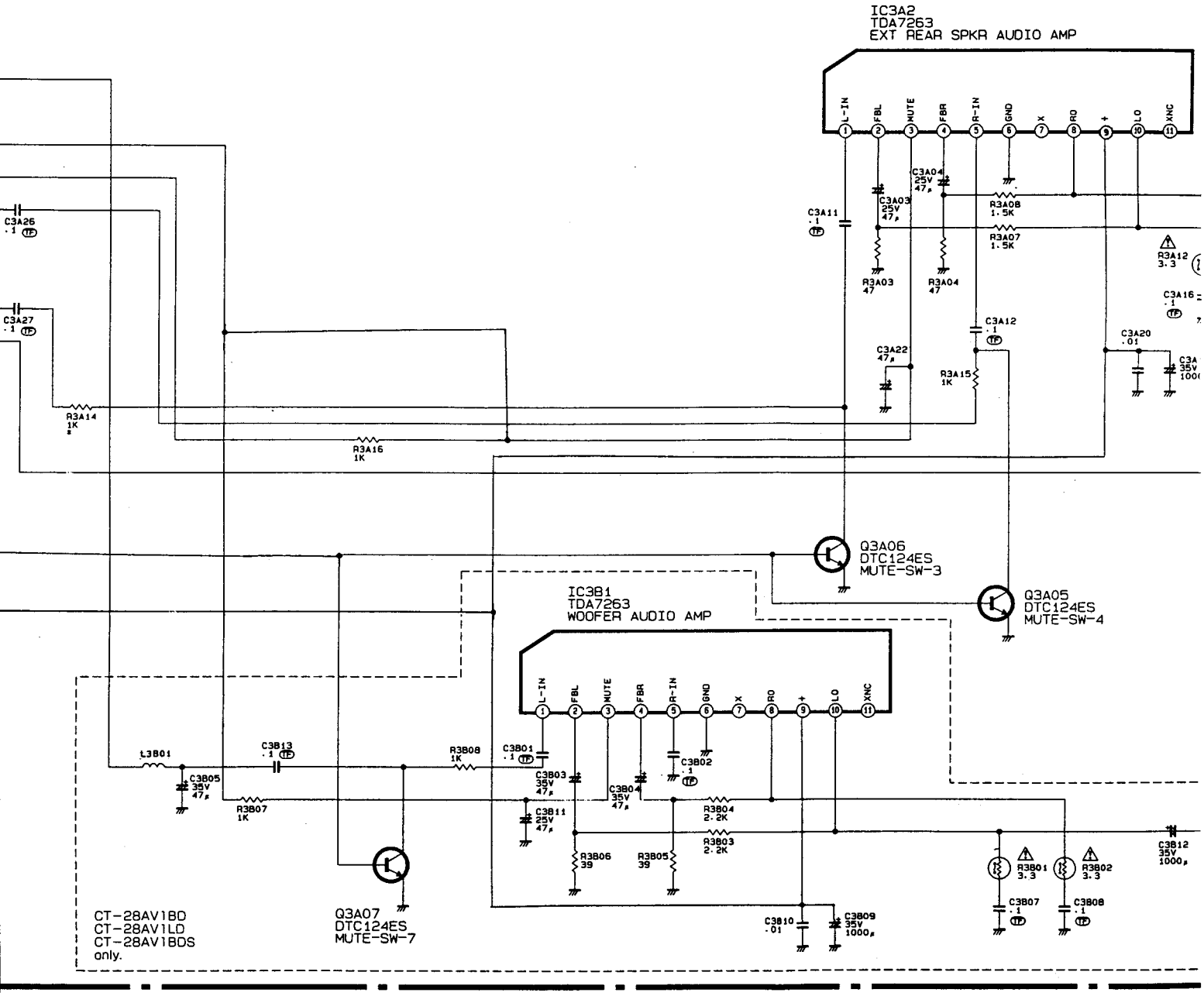
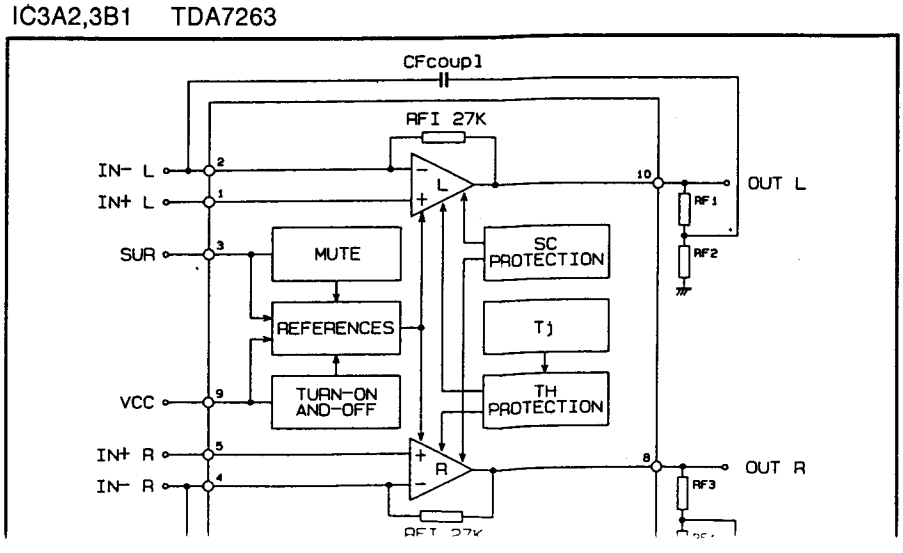
HE
DG
DB
DC
J353
J352
X301

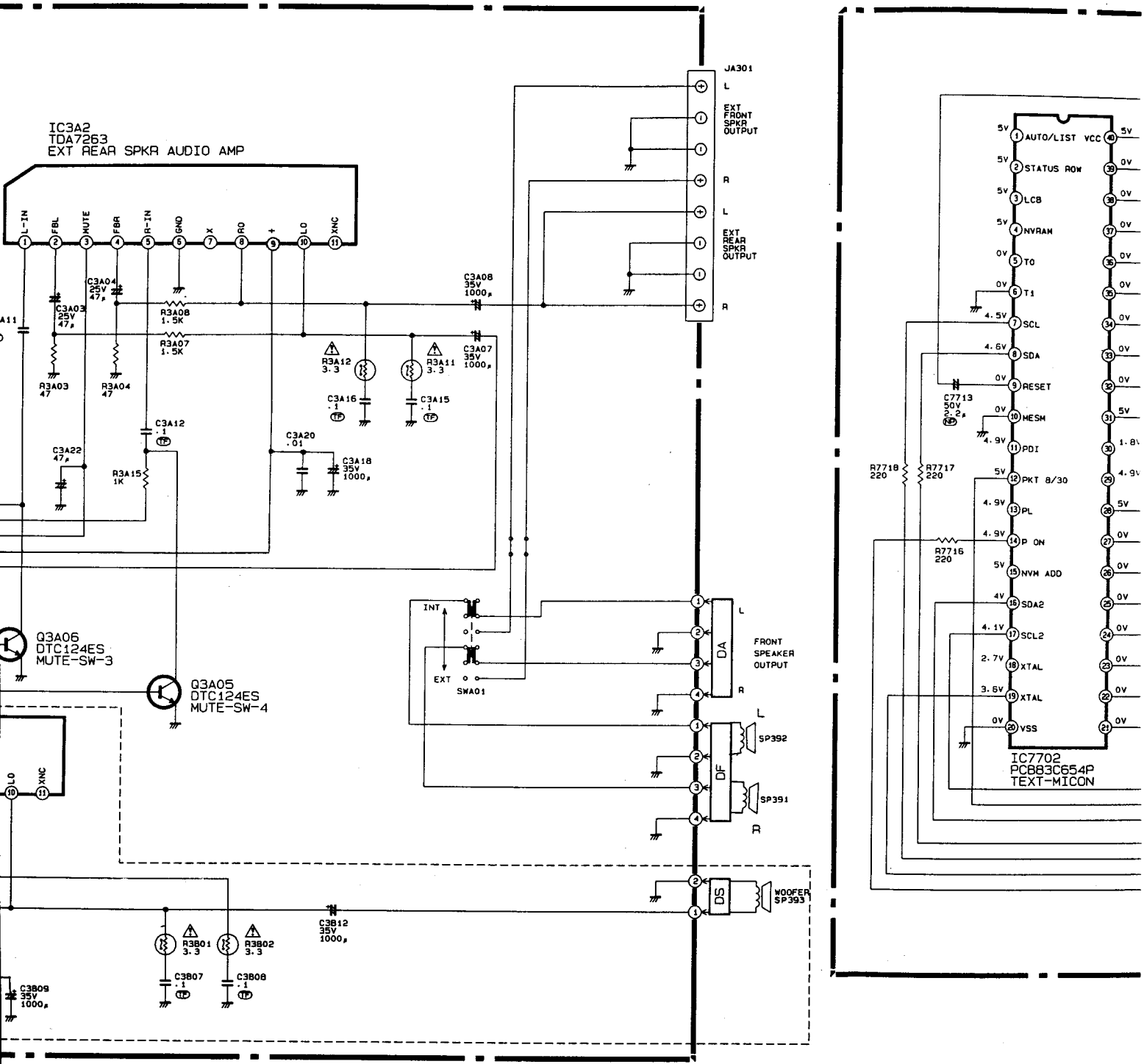

1
2
A
B
C
D
E
F
AUDIO WOOFER
MAIN MUTE
DOLBY3
REAR
C3A26
.1
MAIN R
(CENTRE SMALL SIG)
C3A27
.1
MAIN L
(CENTRE SPEAKER)
R3A14
1K
PCB-DOLBY
DD
PCB-MAIN
DE
PCB-MAIN
DM


1
2
3
A
B
C
D
E
F
PCB-DOLBY DD
DD
AUDIO WOOFER
MAIN MUTE
DOLBY3
REAR
C3A26 .1
MAIN R
(CENTRE SMALL SIG)
C3A27 .1
MAIN L
(CENTRE SPEAKER)
R3A14 1K
R3A16 1K
PCB-MAIN
DE
PCB-MAIN
DM
L3B01
C3B13 .1
C3B05 35V 47
R3B07 1K
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS
only.
Q3A07
DTC124ES
MUTE-SW-7
IC3A2,3

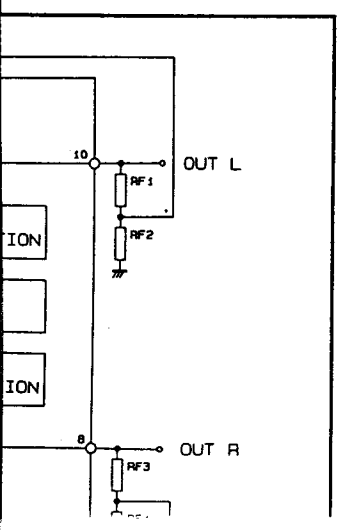


IC3A2,3B1 TDA7263

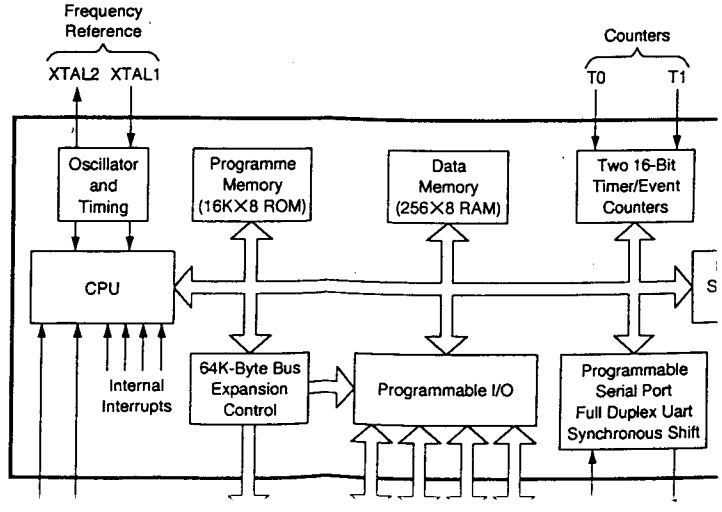


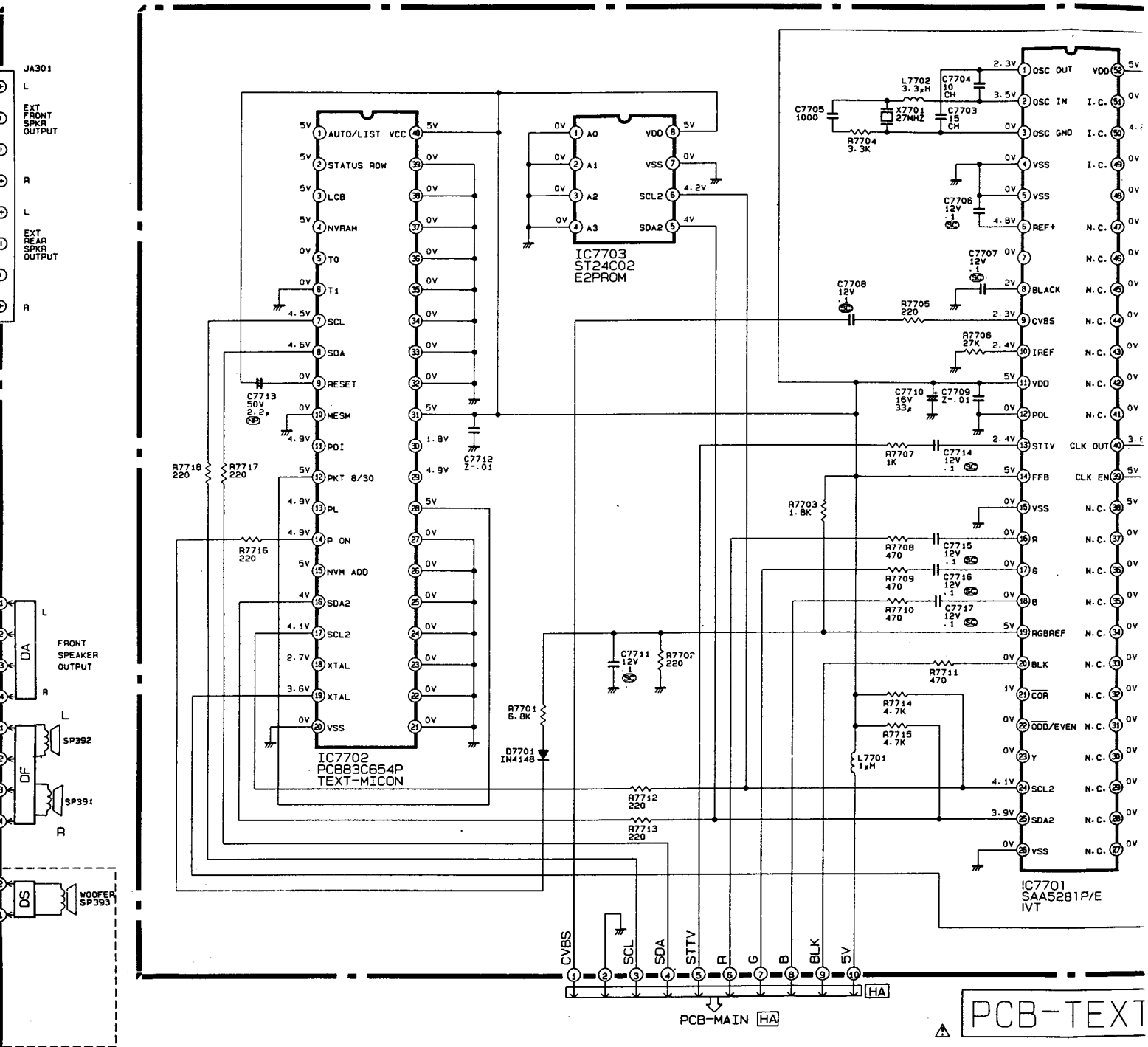


⚠ PCB-AUD-PWR



IC7702 PCB83C654P





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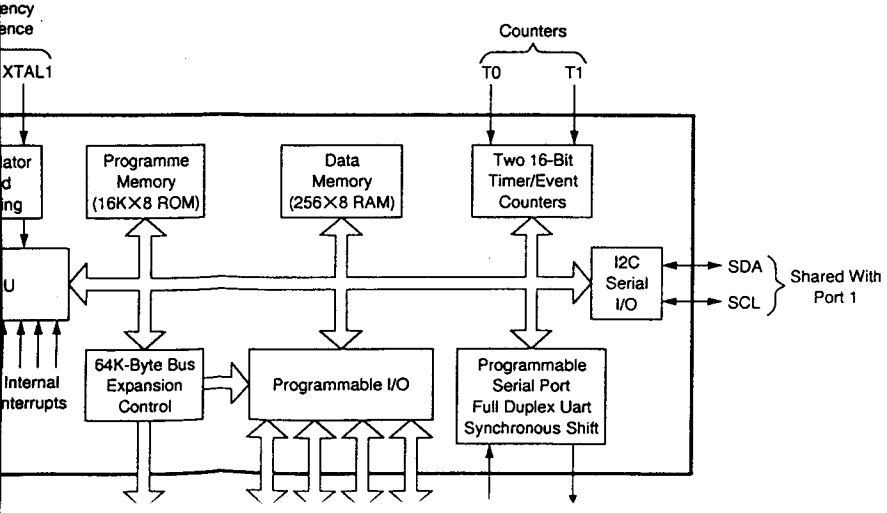
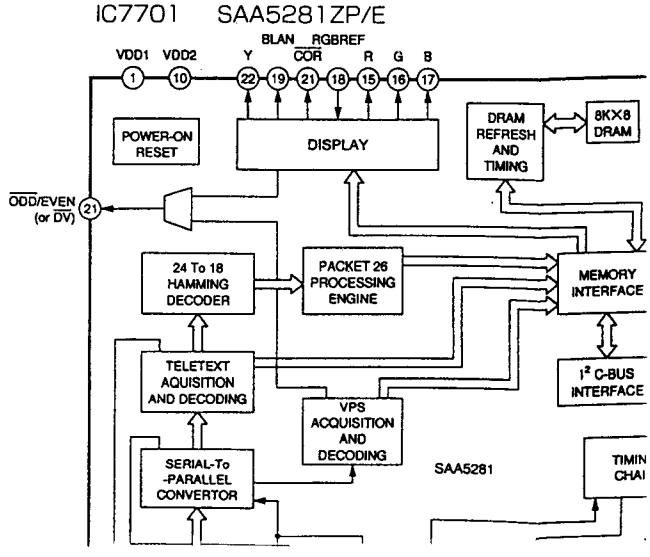
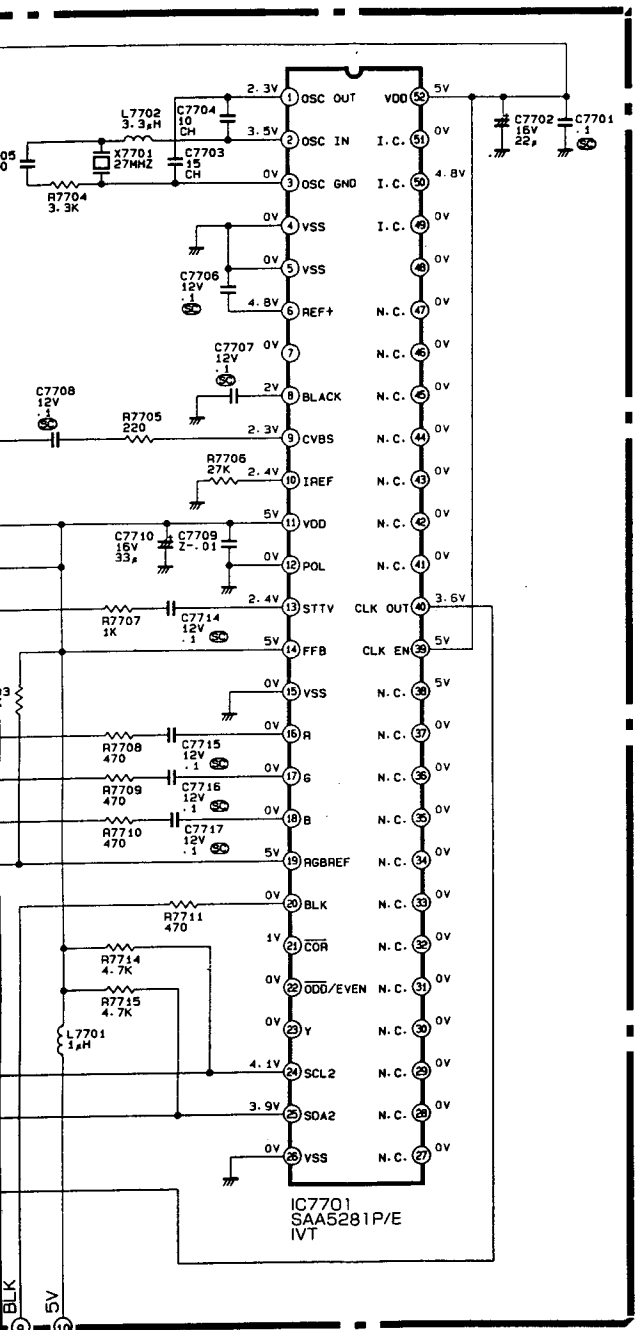
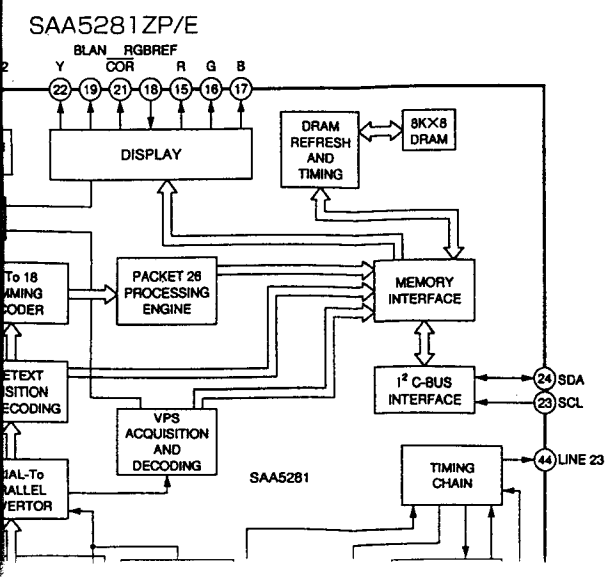


IC7701 SAA5281ZP/E





⚠ PCB-TEXT



⚠ PCB- VIDEOCRYPT

VideoCrypt Decoder

The VideoCrypt decoder PCB is only serviceable by Mitsubishi service department.

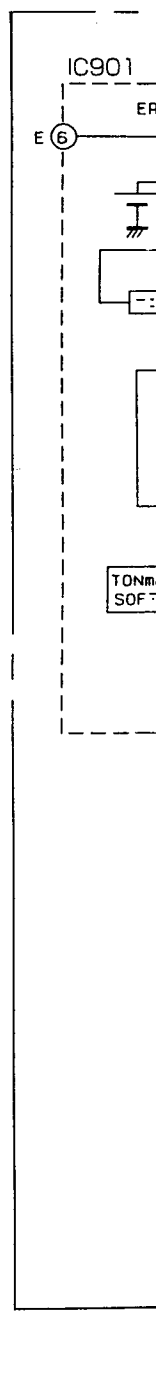
In the event of a fault on this PCB, please follow this procedure:

1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.

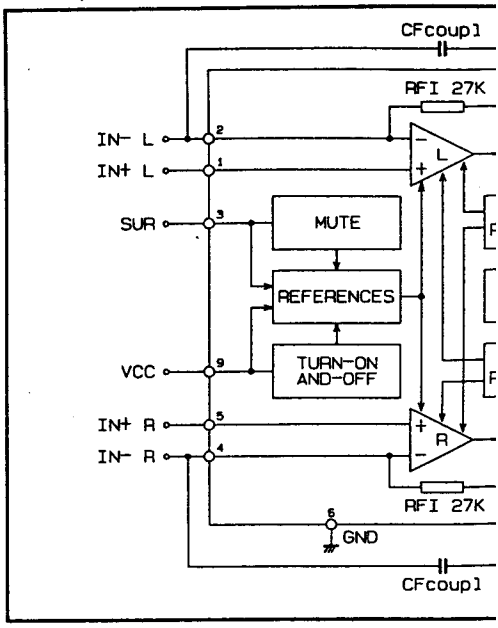
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

Failure to return the PCB within 30 days will incur full replacement PCB costs.

NOTE
The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.

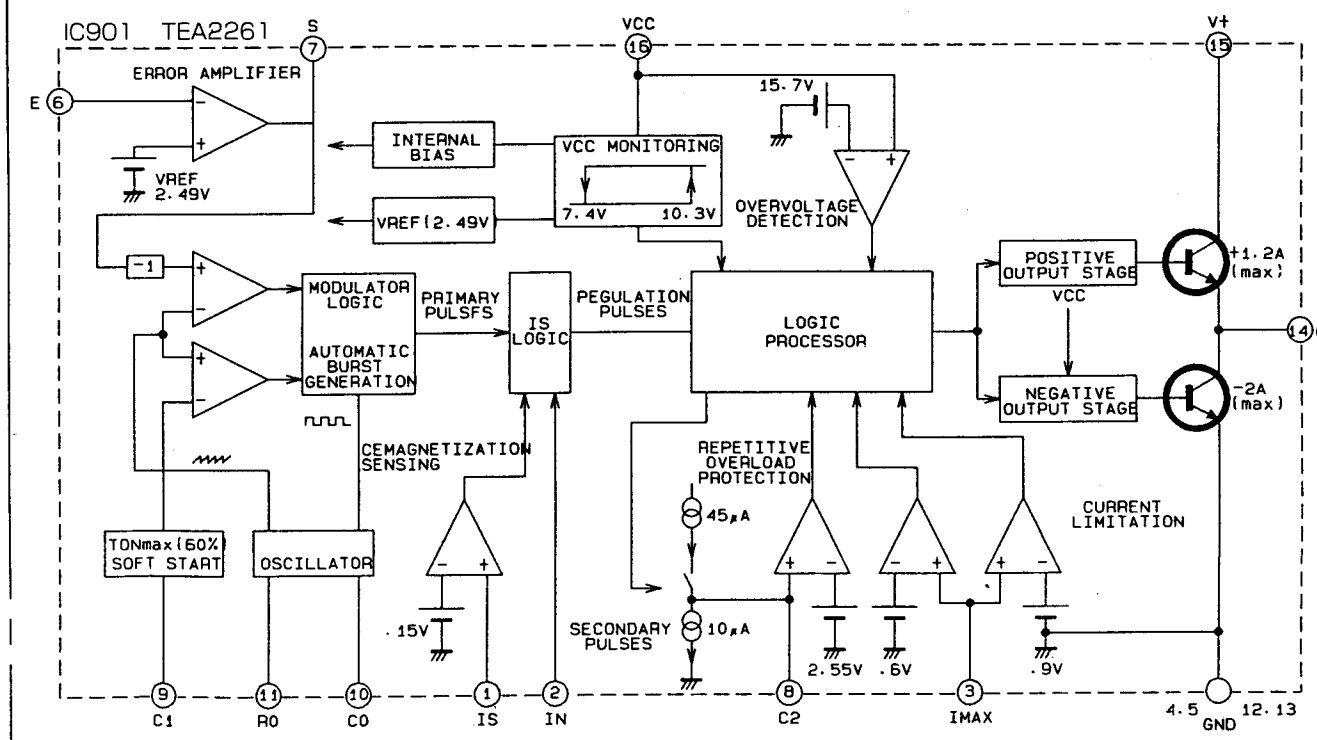

IC901
E
6
TONm
SOF

IC3A2,3B1 TDA7263

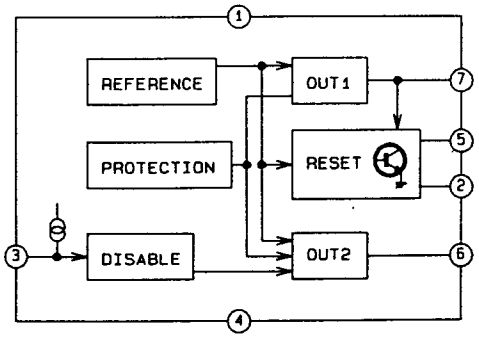


〈 IC block diagrams of PCB-MIAN and CRT

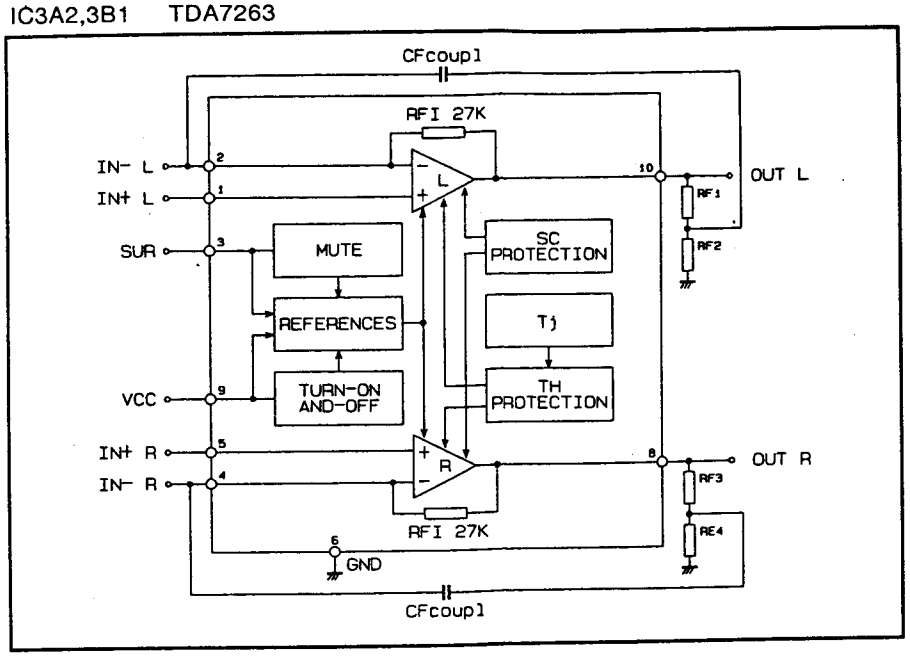
IC901 TEA2261



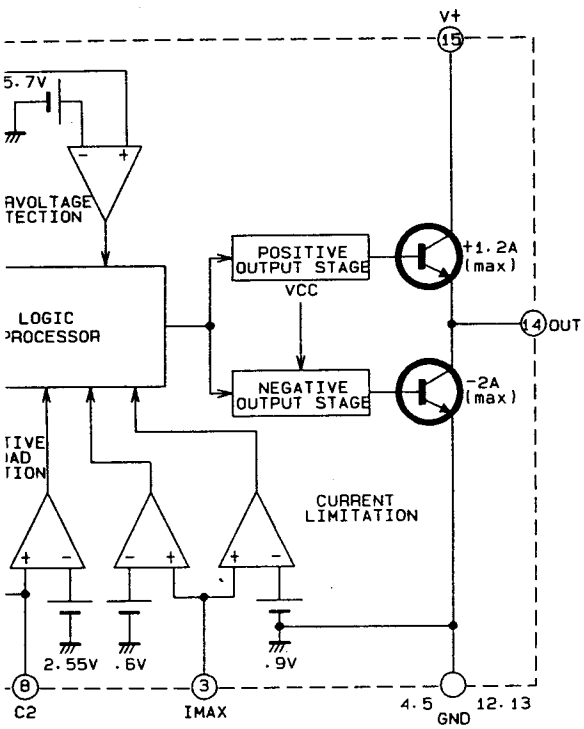
IC951 TDA8137



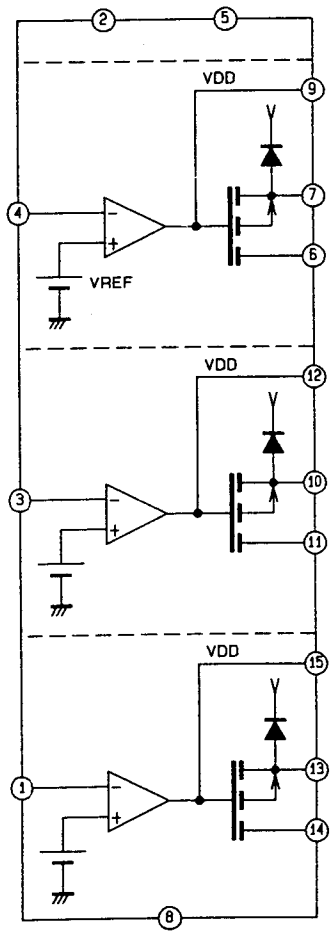
IC3A2,3B1 TDA7263



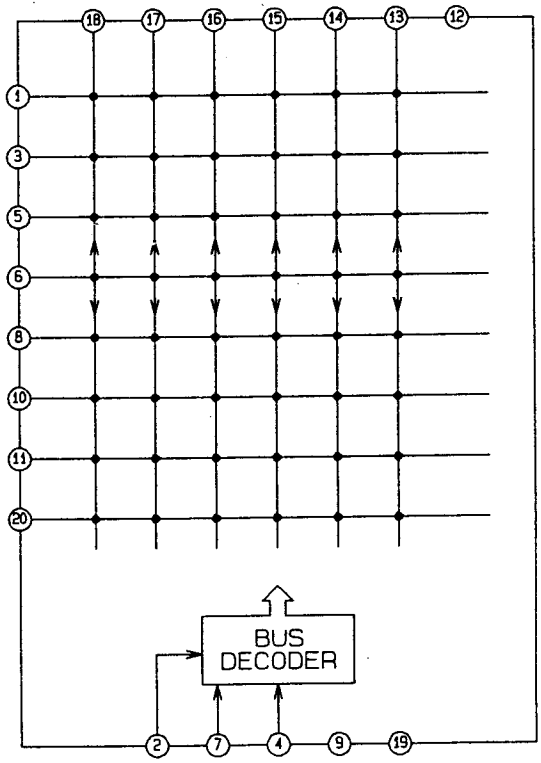
PCB-MIAN and CRT >



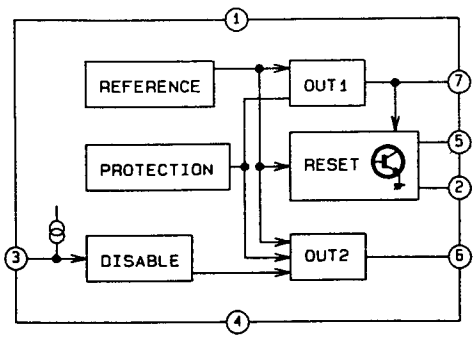
IC660 TEA5101



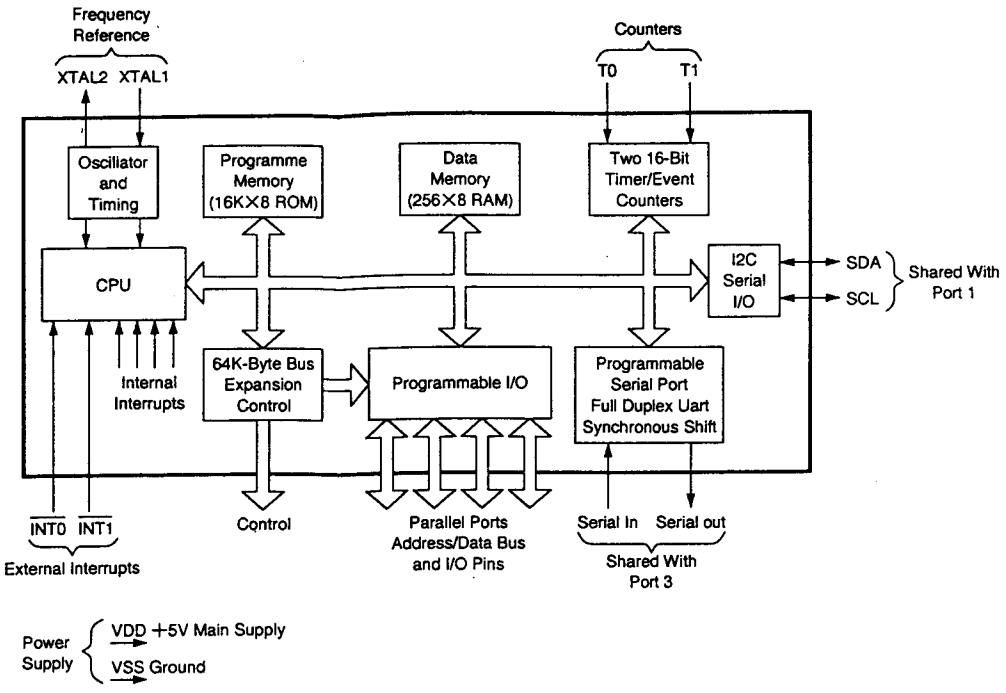
IC202 TEA6415C



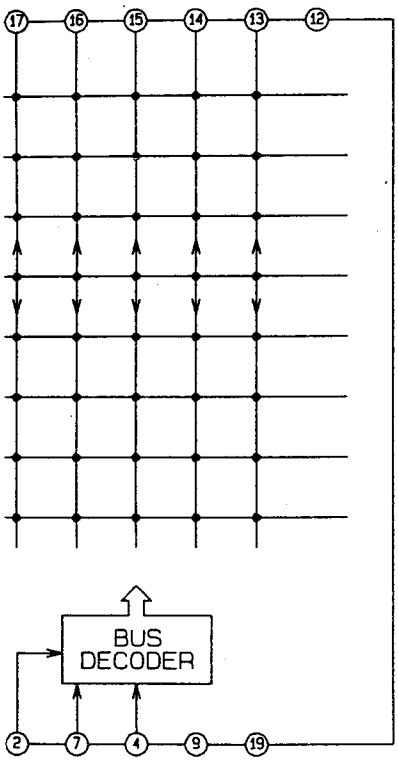
IC951 TDA8137



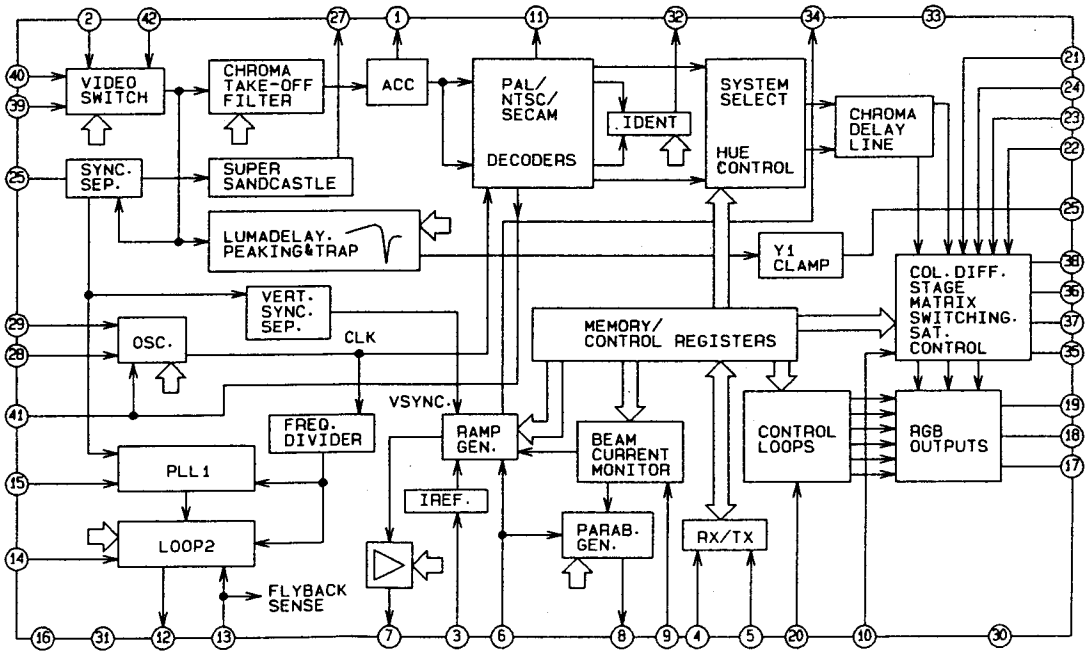
IC7702 PCB83C654P



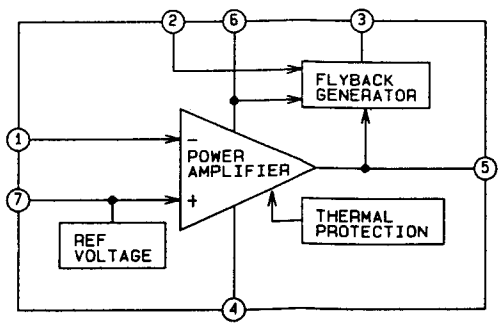
EA6415C



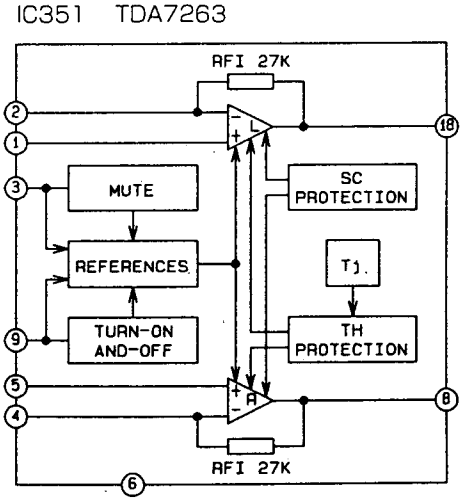
IC201 MC44031



IC401 TDA8171



IC351 TDA7263



The VideoCrypt decoder
department.

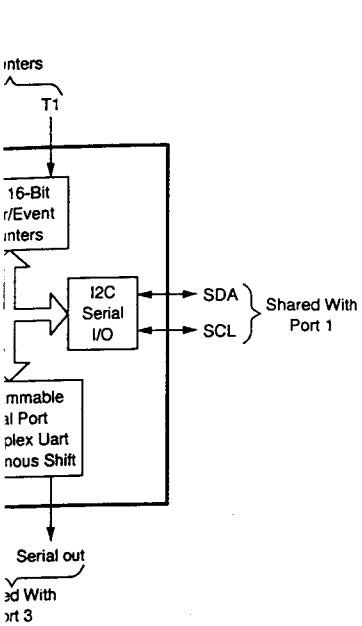
In the event of a fault o

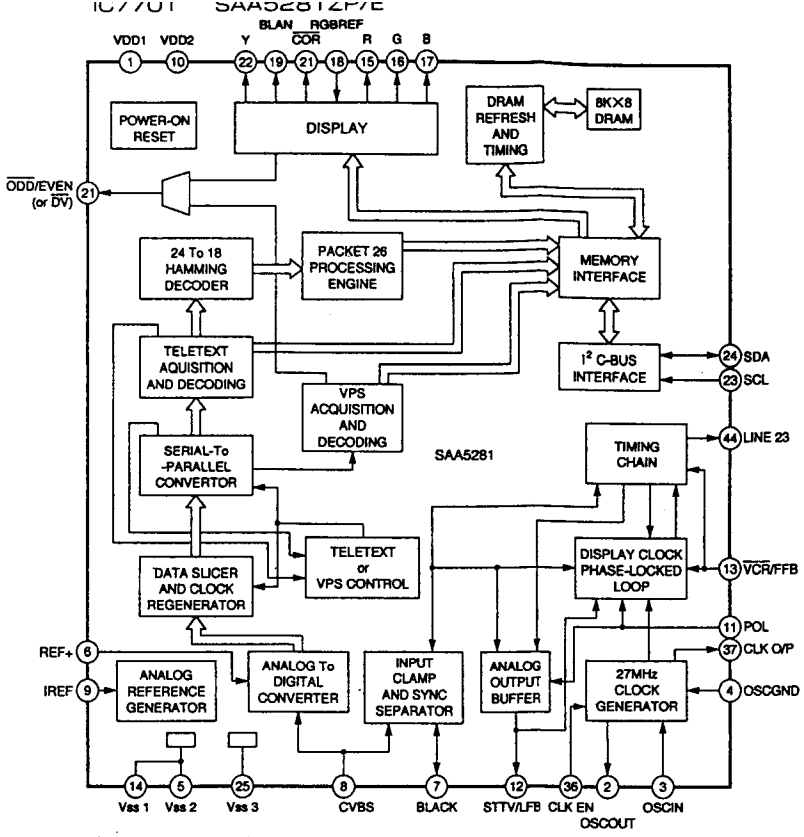
1. Contact the Mitsubis
advance replacemer

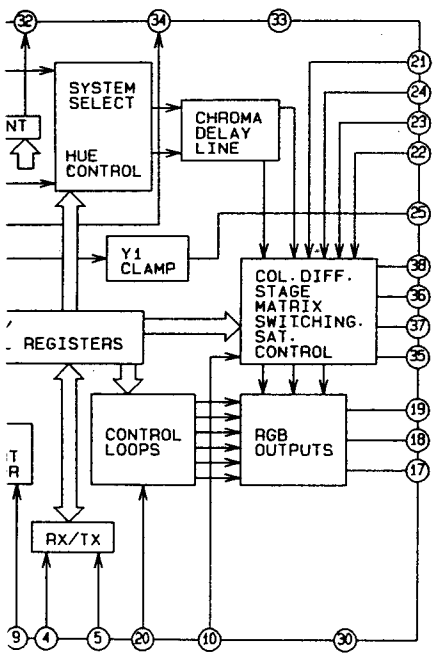
2. Upon receipt of the re
and return it with th

Failure to return the PC
PCB costs.

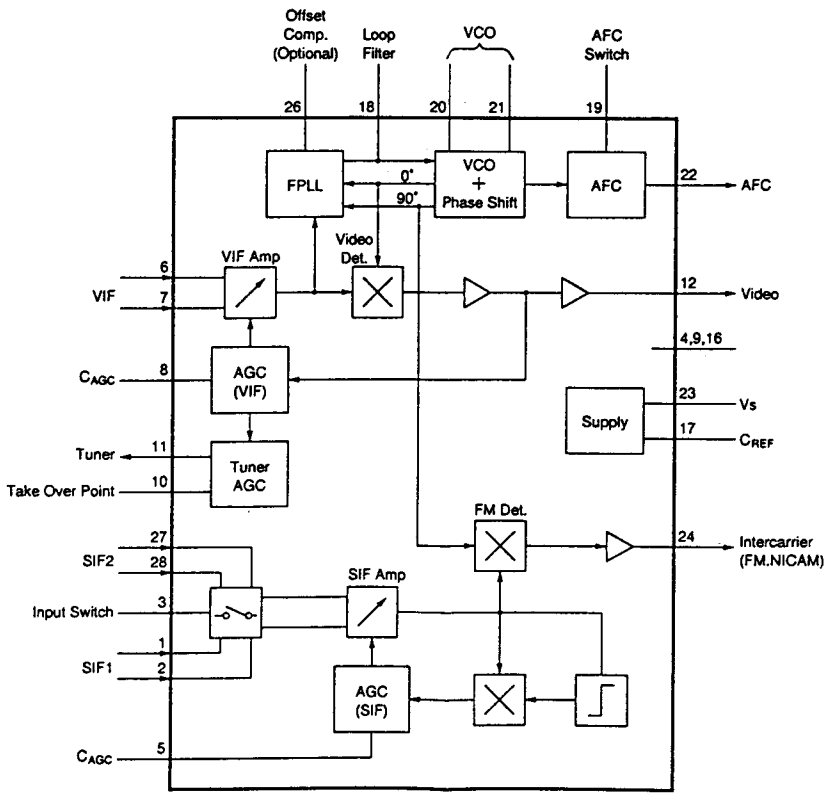
NOTE
The plastic PCB frame,
be retained as the repla
items.



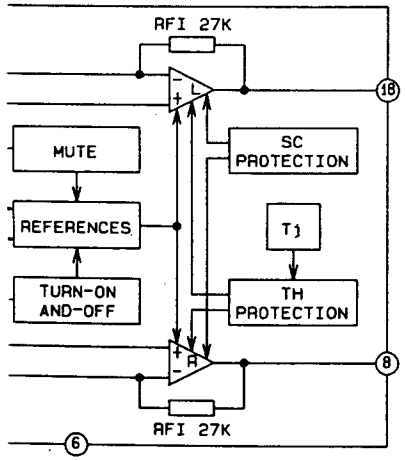




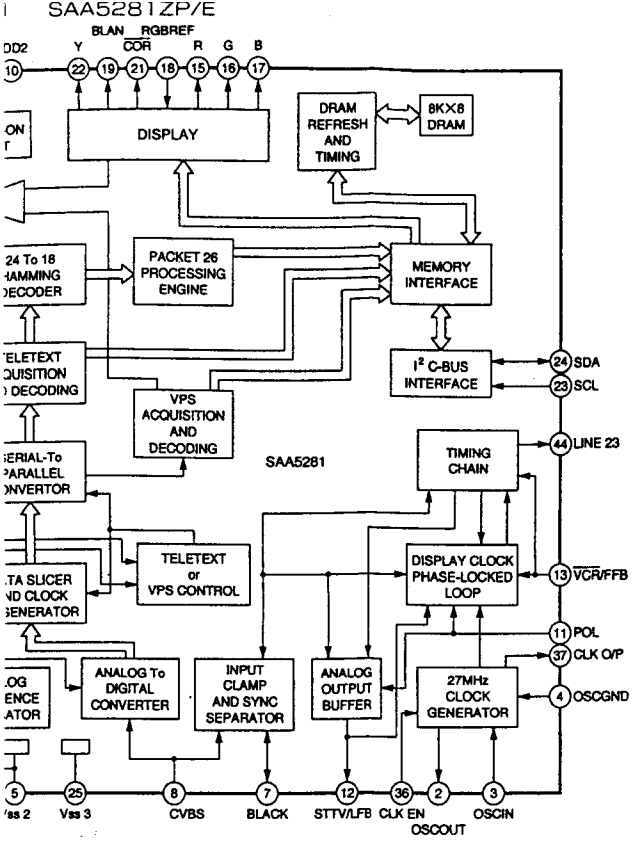
IC101 TDA4472-A



51 TDA7263



SAA5281ZP/E



The VideoCrypt decoder PCB is only serviceable by Mitsubishi service department.

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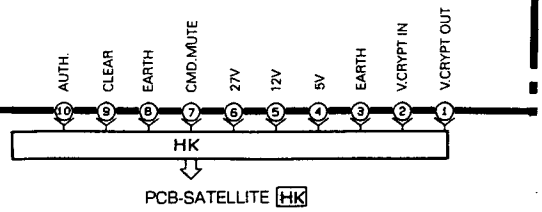
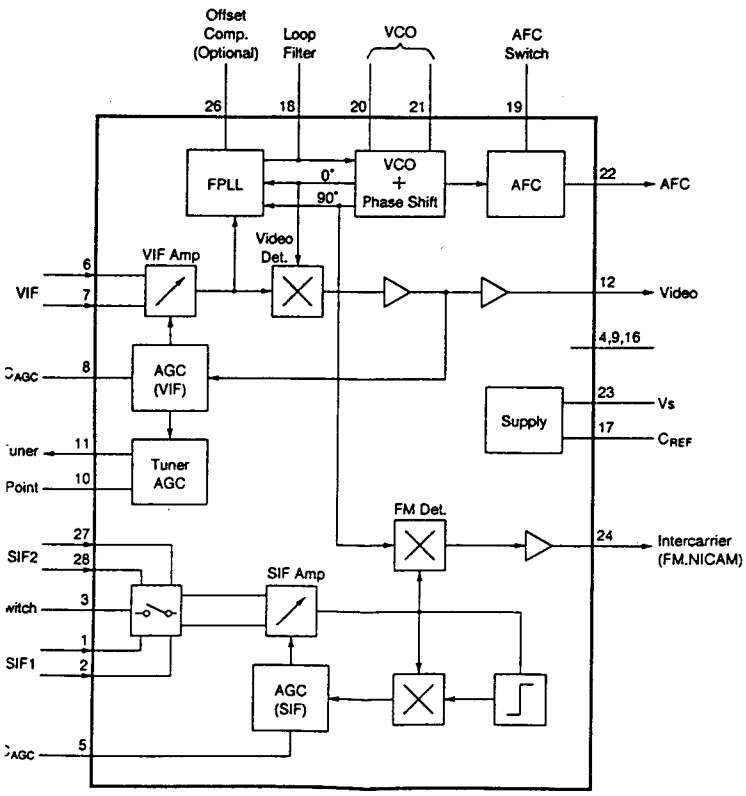
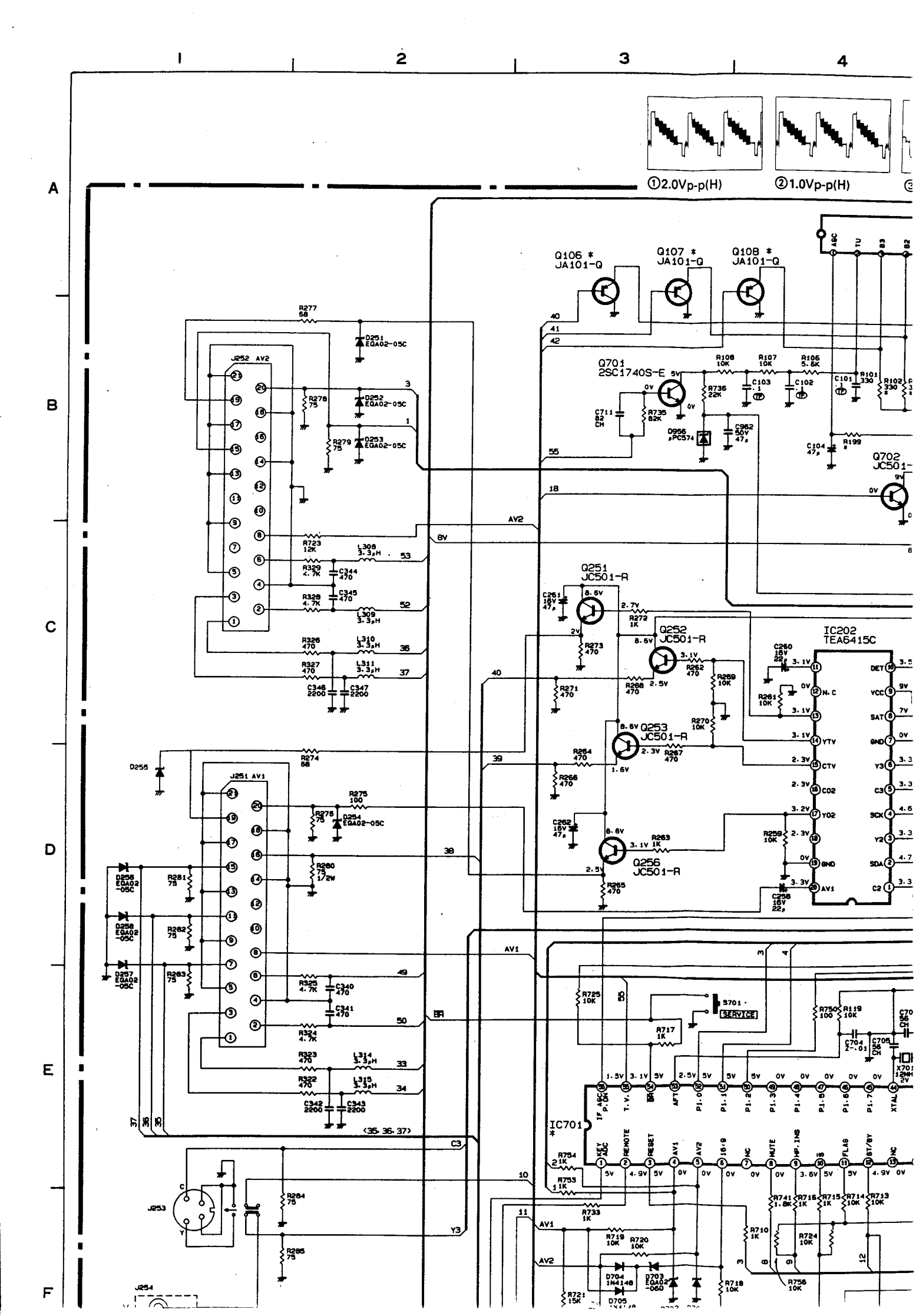


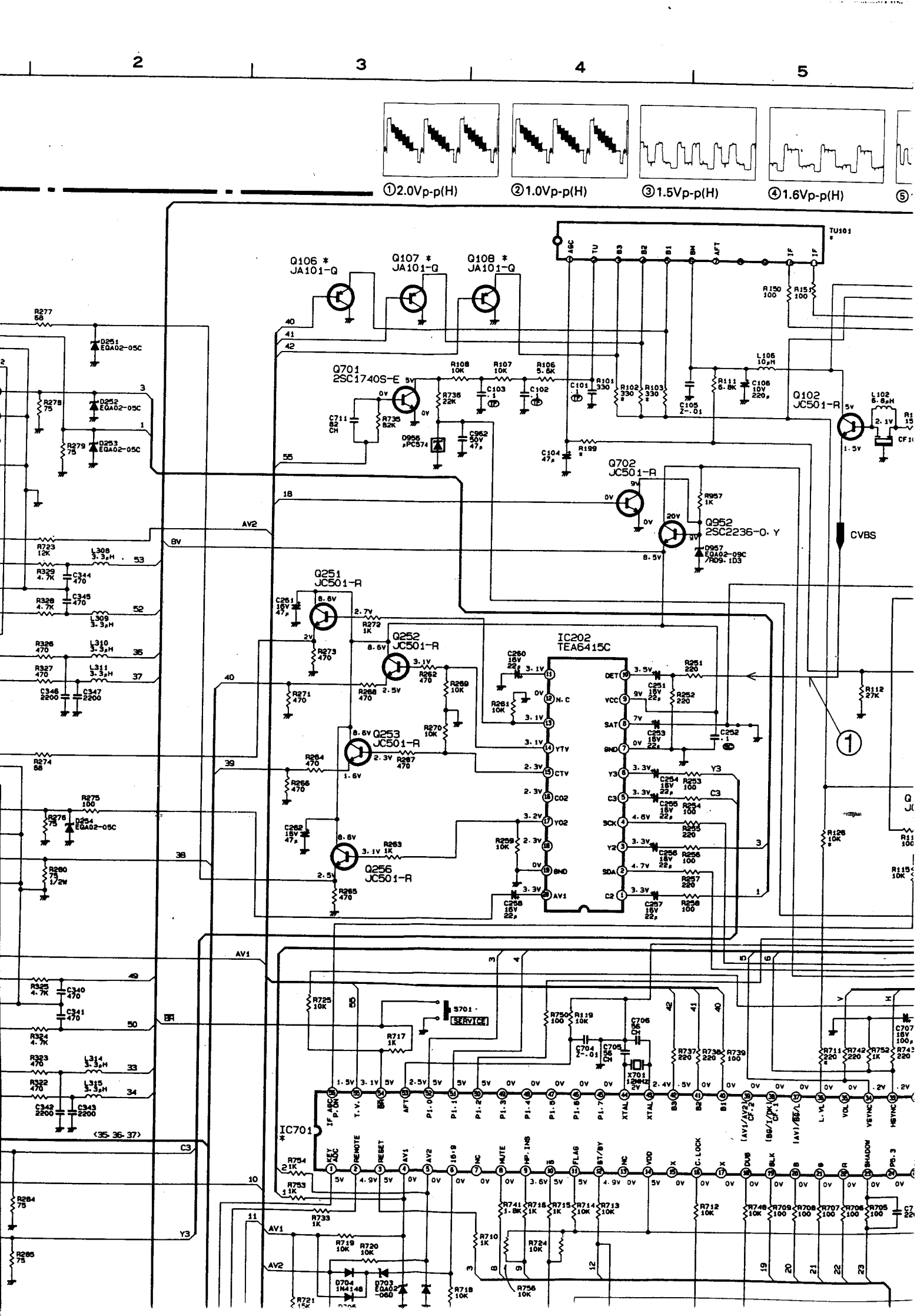
IC101 TDA4472-A

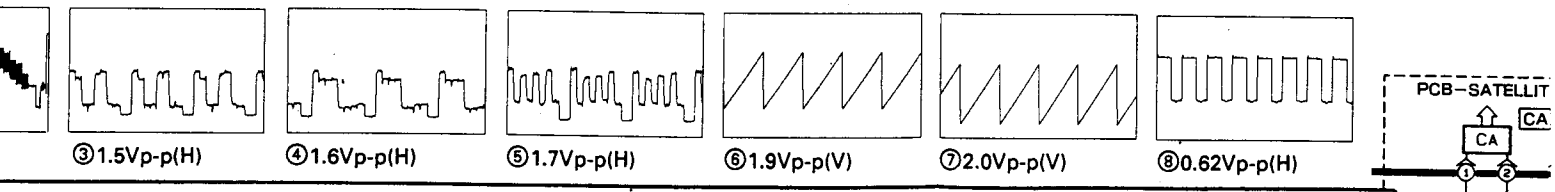


CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS

MITSUBISHI


1
2
3
4
A
B
C
D
E
F
①2.0Vp-p(H)
②1.0Vp-p(H)
Q106 * JA101-Q
Q107 * JA101-Q
Q108 * JA101-Q
Q701 2SC1740S-E
Q702 JC501-
Q251 JC501-R
Q252 JC501-R
Q253 JC501-R
Q256 JC501-R
IC202 TEA6415C
IC701 *
J251 AV1
J252 AV2
J253
J254
D251 EQA02-05C
D252 EQA02-05C
D253 EQA02-05C
D254 EQA02-05C
D255
D256 EQA02-05C
D257 EQA02-05C
D258 EQA02-05C
D703 EQA02-06D
D704 1N4148
D705
D956 μPC574
S701 SERVICE
AV1
AV2
8V
BR
C3
Y3
SERVICE


2
3
4
5
①2.0Vp-p(H)
②1.0Vp-p(H)
③1.5Vp-p(H)
④1.6Vp-p(H)
⑤
TU101
Q106 * JA101-Q
Q107 * JA101-Q
Q108 * JA101-Q
Q701 2SC1740S-E
Q102 JC501-R
Q702 JC501-R
Q952 2SC2236-O. Y
Q251 JC501-R
Q252 JC501-R
Q253 JC501-R
Q256 JC501-R
IC202 TEA6415C
IC701 *
CVBS
SERVICE
S701
X701 12MHz
D251 EQA02-05C
D252 EQA02-05C
D253 EQA02-05C
D254 EQA02-05C
D956 μPC574
D957 EQA02-09C /RD9.1B3
D704 1N4148
D703 EQA02-060
AV1
AV2
Y3
C3
BR
(35·36·37)



③1.5Vp-p(H) ④1.6Vp-p(H) ⑤1.7Vp-p(H) ⑥1.9Vp-p(V) ⑦2.0Vp-p(V) ⑧0.62Vp-p(H)

PCB-SATELLIT

CT-25AV1BDS only

IC101

IC702 ST24C08CB1

Q707 JC501-R

Q102 JC501-R

Q105 JC501-R

Q702 JC501-R

Q952 2SC2236-0. Y

CVBS

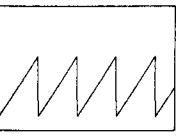
IF

SIF

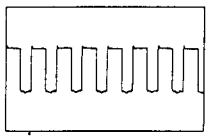
(8. 12. 19)

(3. 9. 20. 21. 22. 23)

SCHEMATIC DIA



2.0Vp-p(V)



⑧0.62Vp-p(H)

PCB-SATELLITE CA

PCB-SATELLITE HH

PCB-DOLBY DB

CT-25AV1BDS only

6H-SYNC 5V-SYNC 4TVBUSD 3TVBUSC 2 PBA 1 PBB BLK

MUTE DOLBY RED L-IN R-IN STBY 5V SCL SDA AV3L AV3R 8V

SIF

IC351 TDA7263

Q302

Q304 JC501-R

Q301

Q305

D301 1N4148

CVBS/Y

IC201 MC44031

Q707 JC501-R

IC702 ST24C08CB1

Q501 JC501-R

D502 1N4148

D201 1N4148

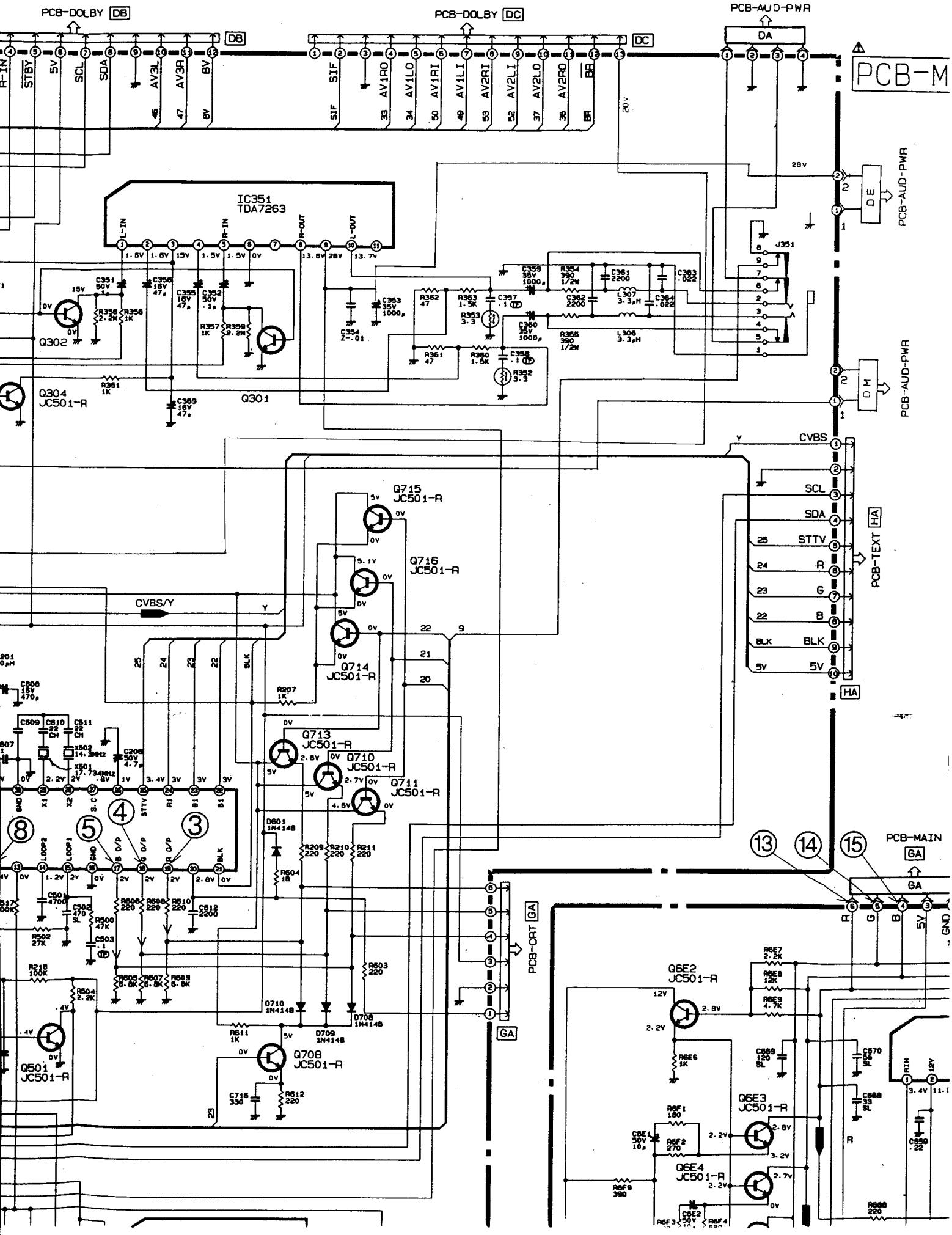
D710 1N4148

D801 1N4148

(3, 9, 20, 21, 22, 23)

(8, 12, 19)

SCHEMATIC DIAGRAMS : CT-25AV1BD/LD/BD



BD/LD/BDS

PCB-AUD-PWR

DA

PCB-MAIN

DIFFERENCE TABLE

	BDS	LD	BD
Q106		○	
Q107		○	
Q108		○	
R102		○	
R103		○	
SF101	J3950	K3953	J3950
TU101	U1343	UV1315	UV1343

28V

DE

PCB-AUD-PWR

J351

DM

PCB-AUD-PWR

CVBS

SCL

SDA

STTV

R

G

B

BLK

5V

PCB-TEXT HA

HA

⑬0.86Vp-p(H)

⑭0.92Vp-p(H)

⑮1.3Vp-p(H)

CT-25AV1BDS only

PCB-MAIN GA

PCB-SATELLITE GB

PCB-CRT

GA

GB

R G B 5V GND FDBK

IC660 TEA5101

R6E7 2.2K

R6E8 12K

R6E9 4.7K

C669 120 SL

C670 56 SL

C666 33 SL

Q6E3 JC501-R

2.8V

3.2V

2.7V

0V

R

R686 220

18 17 16

RIN 12V BIN BIN 200V FDBK BOUT GOUT FDBK ROUT FDBK

3.4V 11.8V 3.5V 3.5V 195V 3.6V 146V 0V 145V 136V 3.6V 138V 142V 3.5V 142V

C659 .22

C660 400V .1

C663 500V 180

C662 500V 330

C664 500V 120

D656 IN4148

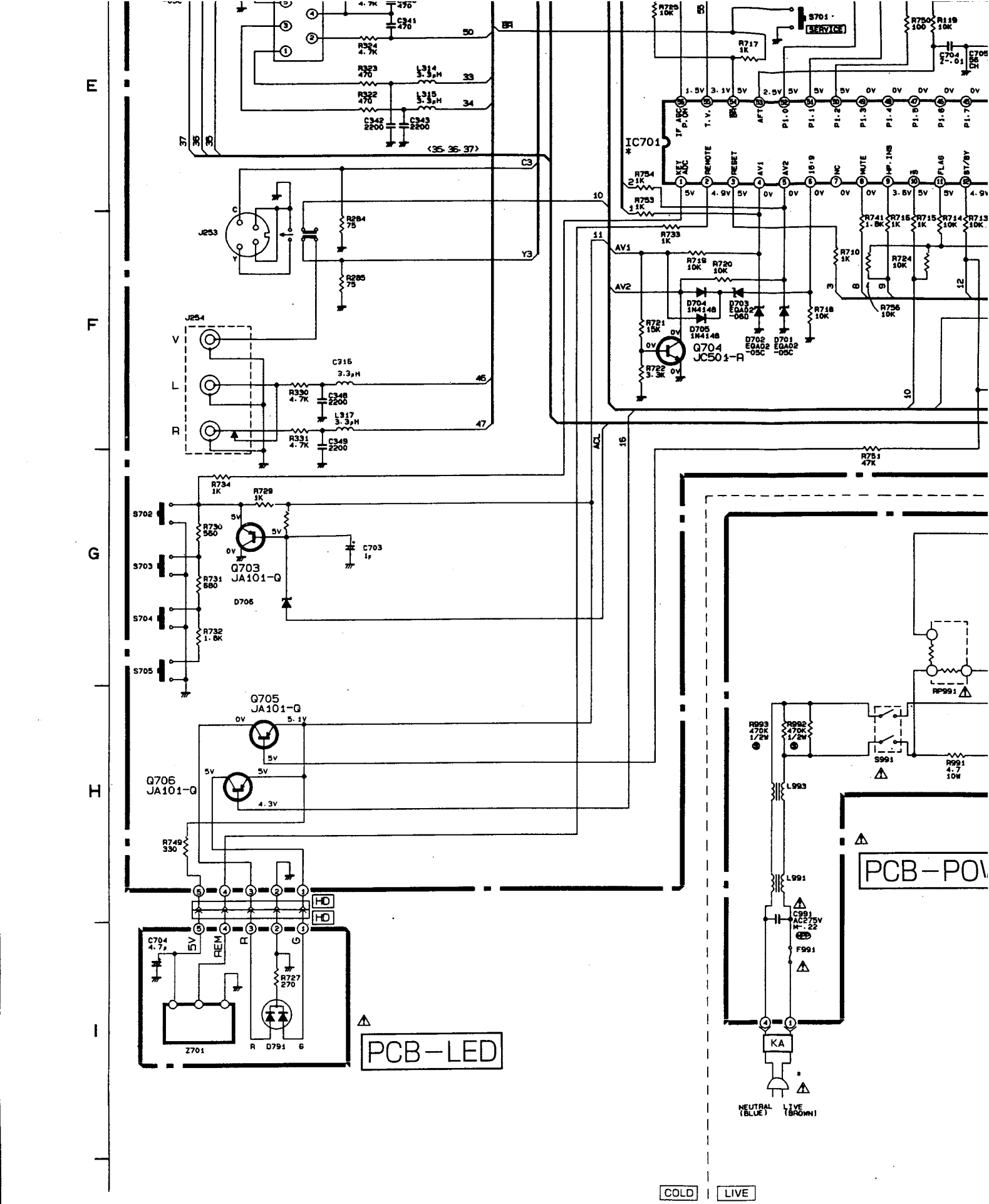
D655 IN4148

D657 IN4148

R674

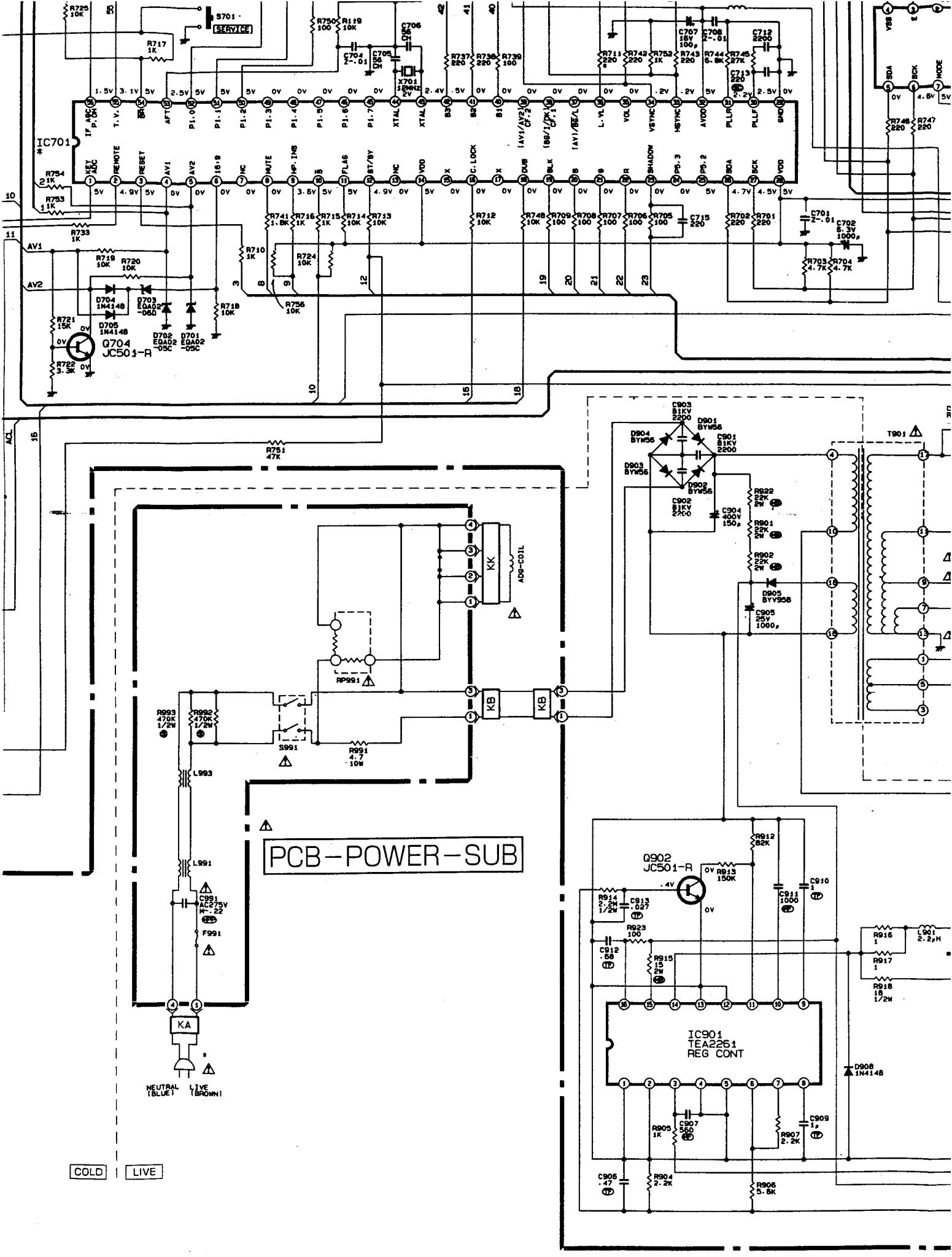
⑯86Vp-p(H)

⑰87Vp-p(H)

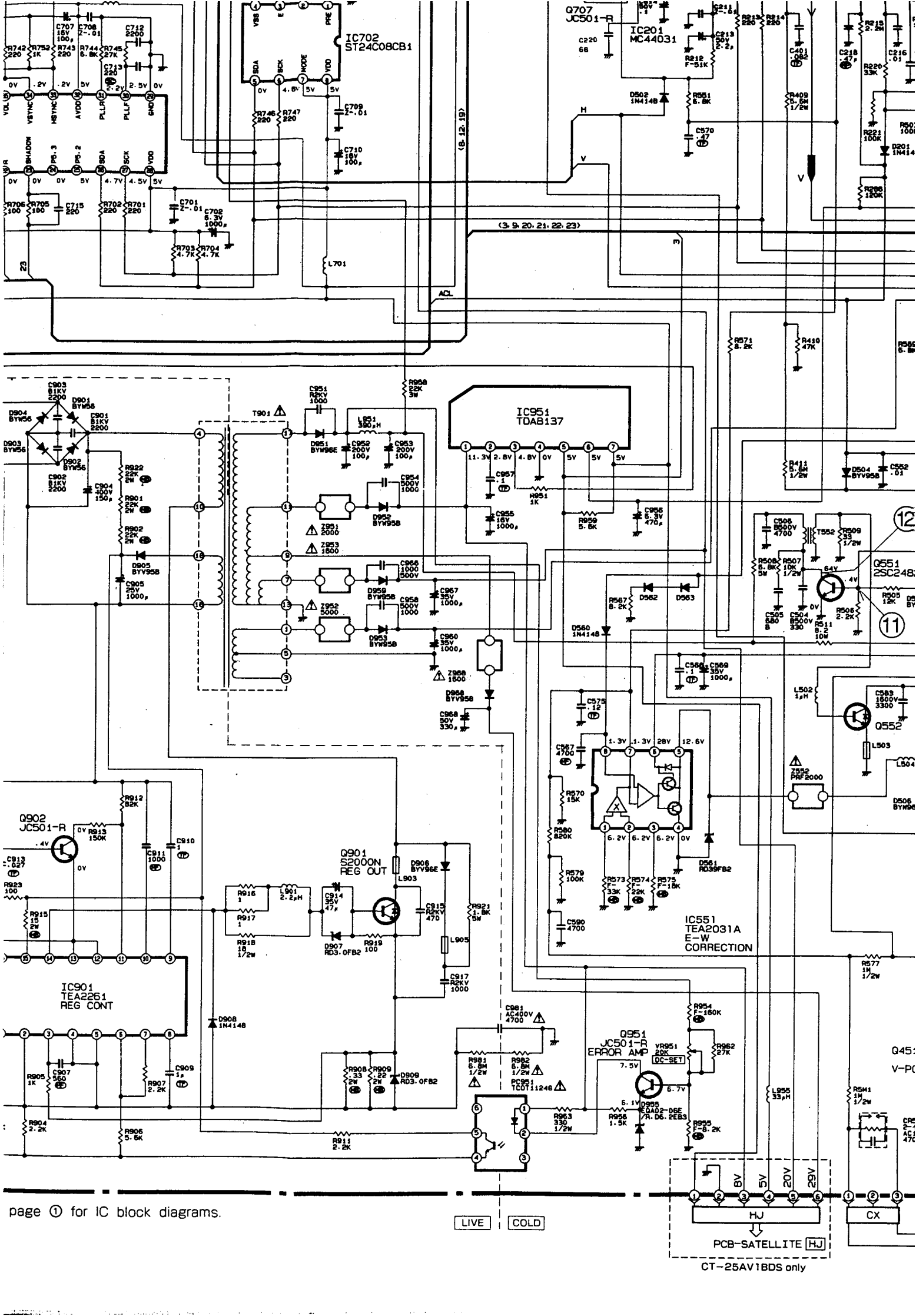


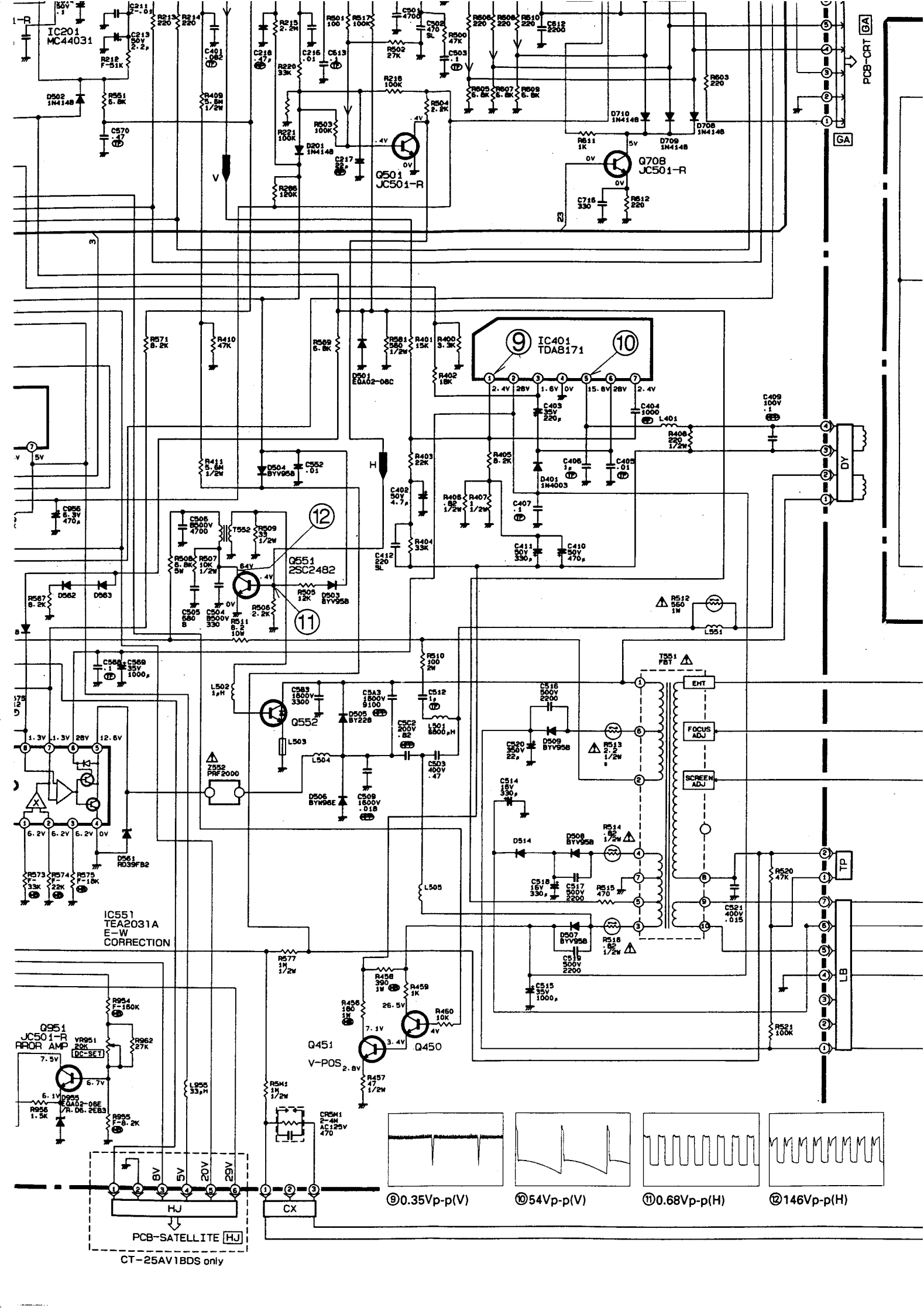
CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS

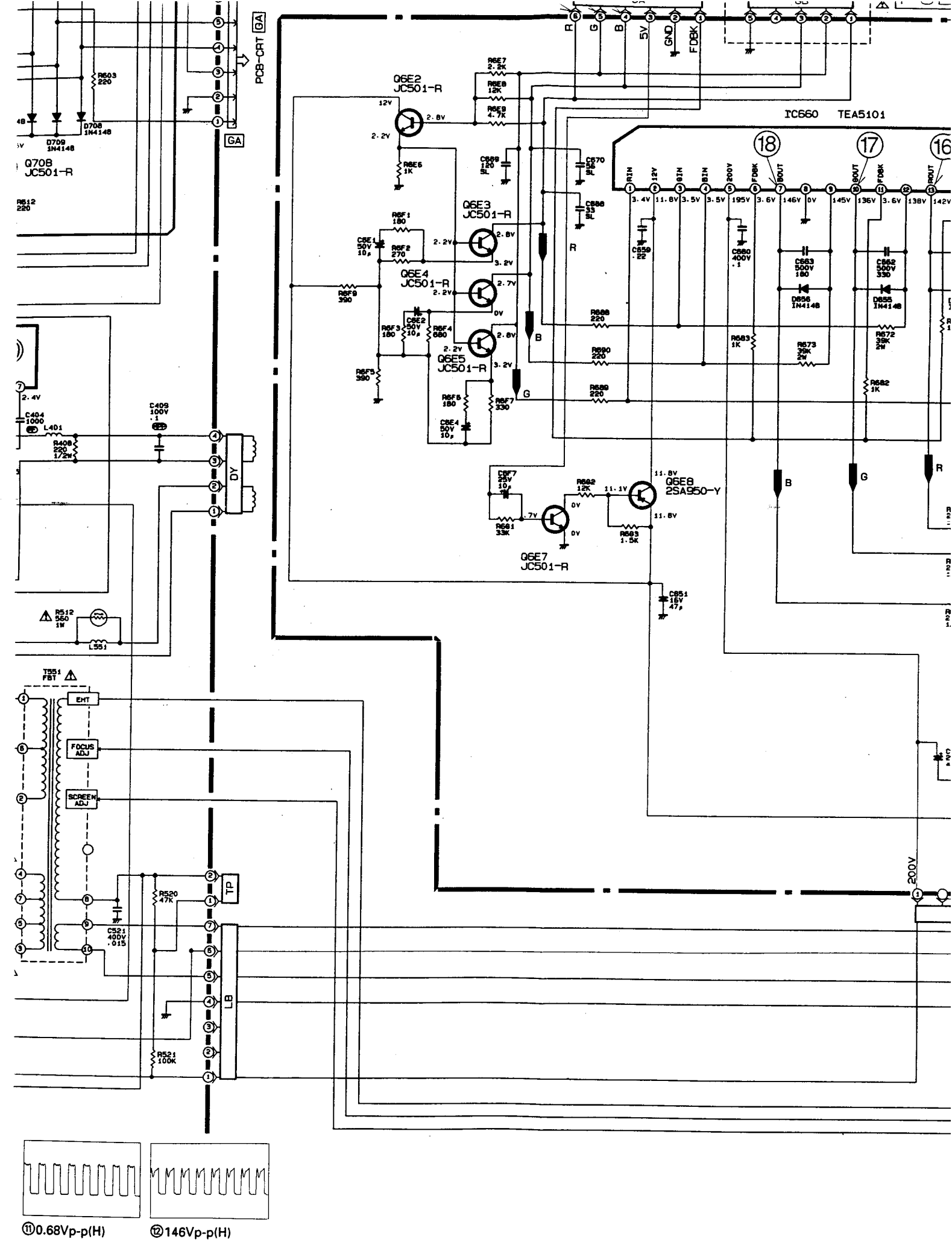
MITSUBISHI ②

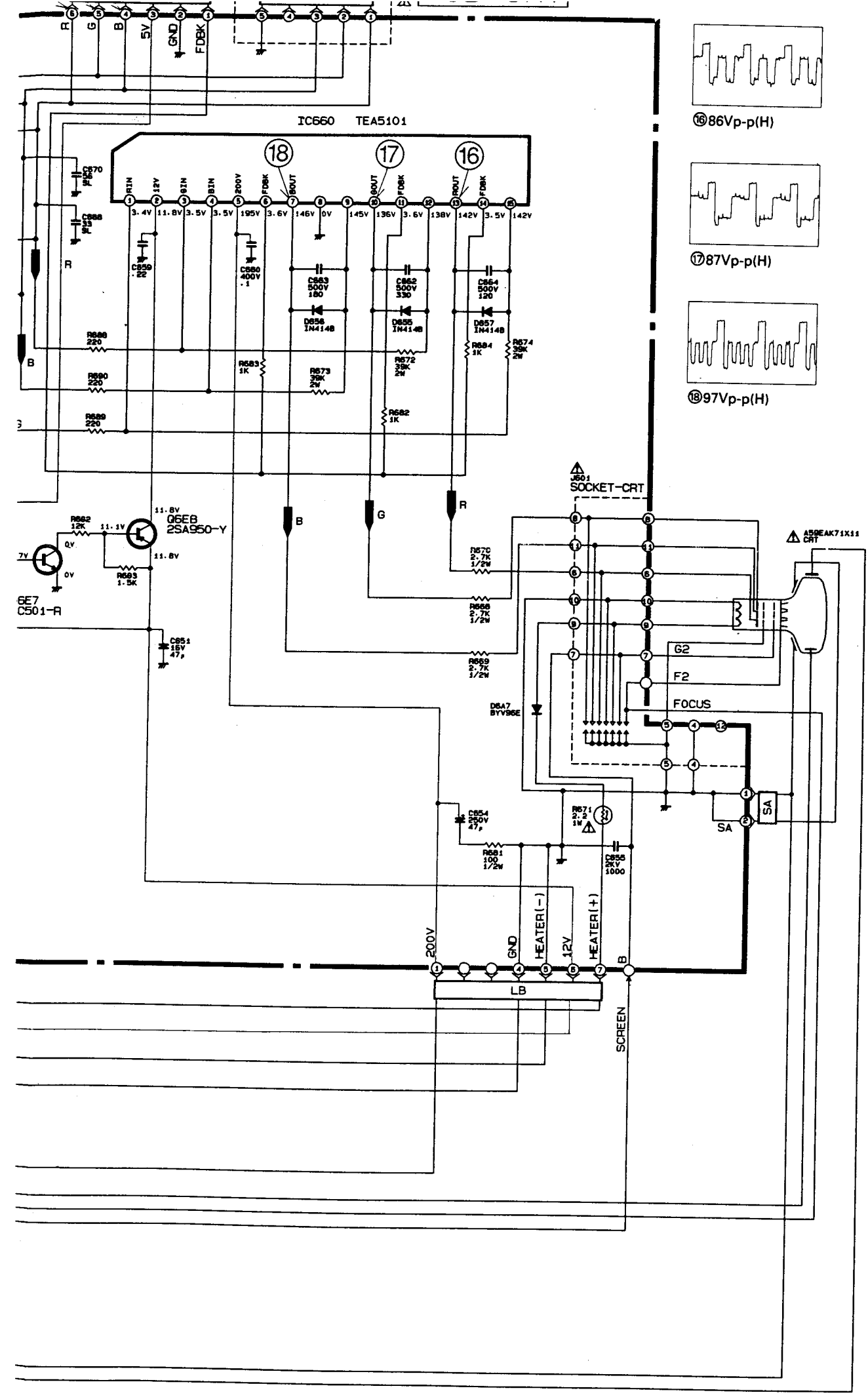


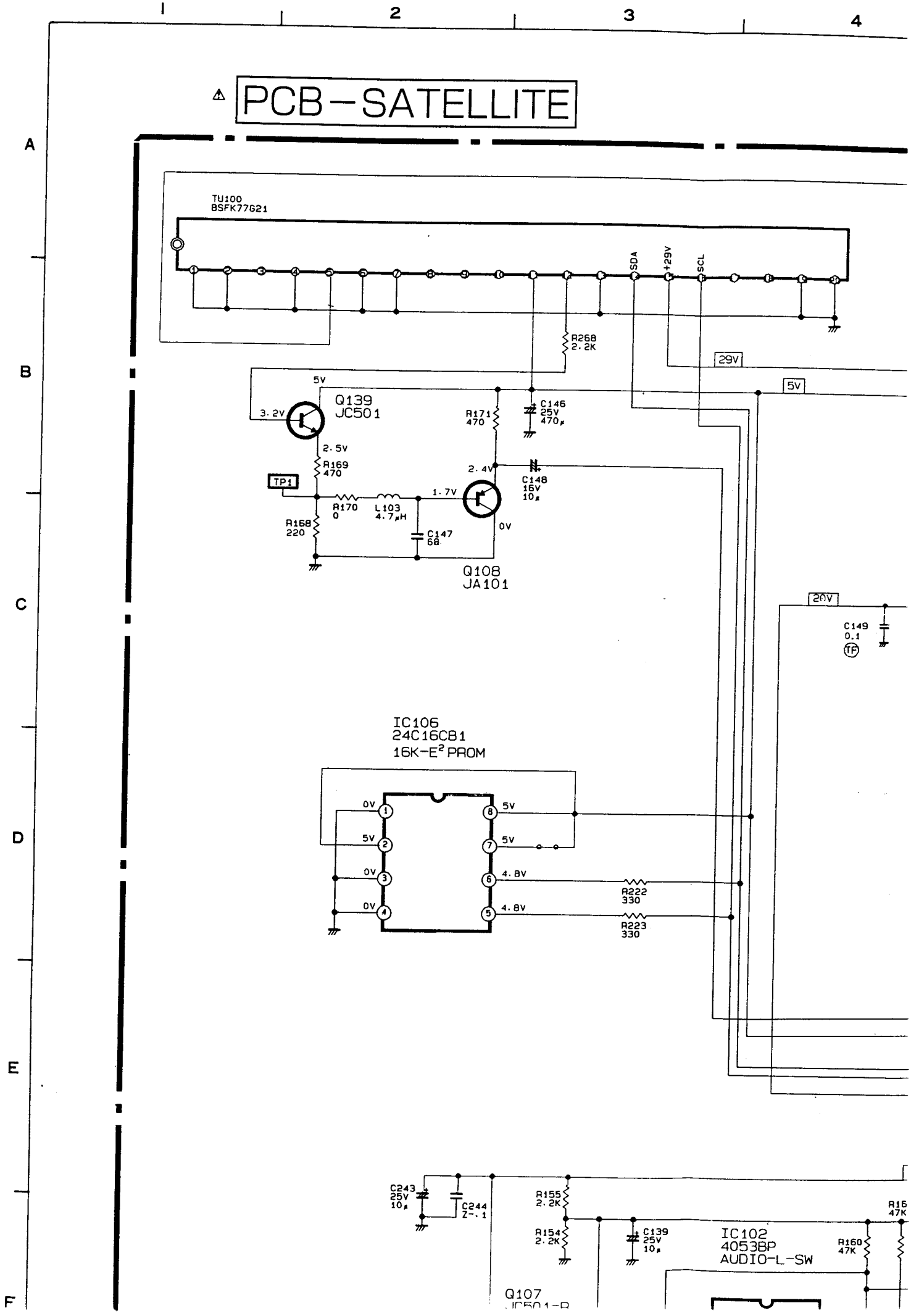
* See page ① for IC block diagrams.


IC702
ST24C08CB1
IC201
MC44031
Q707
JC501-R
IC951
TDA8137
IC551
TEA2031A
E-W
CORRECTION
IC901
TEA2261
REG CONT
Q901
S2000N
REG OUT
Q902
JC501-R
Q951
JC501-R
ERROR AMP
Q551
2SC2482
Q552
T901
T552
L701
L903
L905
L951
L955
L502
L503
D901 BYW56
D902 BYW56
D903 BYW56
D904 BYW56
D905 BYV95B
D906 BYV96E
D907 RD3.0FB2
D908 1N4148
D909 RD3.0FB2
D951 BYW96E
D952 BYW95B
D953 BYW95B
D958 BYV95B
D959 BYW95B
D560 1N4148
D561 RD39FB2
D562
D563
D502 1N4148
D504 BYV95B
D201 1N4148
PC951 TCDT11246
D955 MA402-06E
/A.D6.2EB3
Z951 2000
Z952 5000
Z953 1500
Z958 1600
Z552 PRF2000
VR951 20K
DC-SET
HJ
CX
8V
5V
20V
29V
PCB-SATELLITE HJ
CT-25AV1BDS only
LIVE
COLD
ACL
H
V
page ① for IC block diagrams.


IC201
MC44031
Q501
JC501-R
Q708
JC501-R
IC401
TDA8171
Q551
2SC2482
Q552
IC551
TEA2031A
E-W
CORRECTION
Q951
JC501-R
ERROR AMP
Q451
V-POS
Q450
PCB-CRT GA
GA
DY
TP
LB
EHT
FOCUS ADJ
SCREEN ADJ
PCB-SATELLITE HJ
CT-25AV1BDS only
⑨0.35Vp-p(V)
⑩54Vp-p(V)
⑪0.68Vp-p(H)
⑫146Vp-p(H)


PCB-CRT
GA
R
G
B
5V
GND
FDBK
IC660 TEA5101
Q6E2 JC501-R
Q6E3 JC501-R
Q6E4 JC501-R
Q6E5 JC501-R
Q6E7 JC501-R
Q6E8 2SA950-Y
Q708 JC501-R
D709 1N4148
D708 1N4148
D856 IN4148
D855 IN4148
DY
EHT
FOCUS ADJ
SCREEN ADJ
TP
LB
T551 FBT
200V
⑪0.68Vp-p(H)
⑫146Vp-p(H)


R
G
B
5V
GND
FDBK
IC660 TEA5101
18
17
16
RIN
12V
GIN
BIN
200V
FDBK
BOUT
GOUT
FDBK
ROUT
FDBK
3.4V 11.8V 3.5V 3.5V 195V 3.6V 146V 0V 145V 136V 3.6V 138V 142V 3.5V 142V
C870 56 SL
C868 33 SL
C859 .22
C860 400V .1
C863 500V 180
C862 500V 330
C864 500V 120
D856 IN4148
D855 IN4148
D857 IN4148
R688 220
R690 220
R689 220
R683 1K
R673 39K 2W
R672 39K 2W
R682 1K
R684 1K
R674 39K 2W
⑯86Vp-p(H)
⑰87Vp-p(H)
⑱97Vp-p(H)
J601
SOCKET-CRT
R662 12K
11.1V
11.8V
Q6EB
2SA950-Y
7V
0V
R693 1.5K
6E7
C501-A
C851 16V 47μ
R657 2.7K 1/2W
R658 2.7K 1/2W
R659 2.7K 1/2W
D6A7 BYV96E
G2
F2
FOCUS
SA
R671 2.2 1W
C854 250V 47μ
R681 100 1/2W
C855 2KV 1000
200V
GND
HEATER(-)
12V
HEATER(+)
B
LB
SCREEN


1
2
3
4
A
B
C
D
E
F
PCB－SATELLITE
TU100
BSFK77G21
SDA
+29V
SCL
R268
2.2K
29V
5V
Q139
JC501
3.2V
R171
470
C146
25V
470μ
2.5V
R169
470
TP1
2.4V
C148
16V
10μ
1.7V
R170
0
L103
4.7μH
R168
220
C147
68
0V
Q108
JA101
20V
C149
0.1
TP
IC106
24C16CB1
16K-E² PROM
0V
5V
4.8V
R222
330
R223
330
C243
25V
10μ
C244
Z-.1
R155
2.2K
R154
2.2K
C139
25V
10μ
IC102
4053BP
AUDIO-L-SW
R160
47K
R16
47K
Q107

ITE

PCB-

SDA +29V SCL

R268 2.2K

29V

5V

R275 4.7K

C245 4.7μ

C146 25V 470μ

C148 16V 10μ

IC108 LM317T

20V

12.7V

11.4V

C149 0.1 TF

R236 F-220 M

C182 Z-.01

Q112 JA101-Q

R181 4.7K

R232 F-1.4K M

Q121 JC501-R

4.4V

3.3V

R231 F-910 M

R229 4.7K

4V

Q123 JC501-R

R233 2.2K

C181 K-.01

R230 F-560 M

R180 10K

R235 10K

R222 330

R223 330

Q122 JC501-R

R234 10K

CVBS

TP2

TP9

Q102 JC501-R

12V

2.2V

R110 100

1.5V

R108

8V

R155 2.2K

R154 2.2K

C139 25V 10μ

IC102 4053BP AUDIO-L-SW

R161 47K R162 47K

R160 47K

R163 47K

C190 16V 10μ

Q107 JC501-R

0V

PCB-MAIN CA

CA

R275 4.7K

C246 4.7μ

IC108 LM317T

20V 12.7V 11.4V

R236 F-220

C182 Z-.01

Q121 JC501-R

R181 4.7K

4.4V

R232 F-1.4K

3.3V

R231 F-910

4V

R229 4.7K

3.3V

R233 2.2K

Q123 JC501-R

11.4V 0V 0V

C181 K-.01

R230 F-560

3.3V 0V 0V

R180 10K

R235 10K

Q122 JC501-R

R234 10K

Q113 JA101-Q

12V

R187 470

4.3V

3.6V

R188 470

0V

R184 6.2K

C157 68 CH

TP6

TP5

R186 560

R183 820

C155 16V 10μ

R185 12K

C159 12 CH

L104 18μH

C161 47

L105 12μH

LINK100

C158 68 CH

C160 100 CH

C163 56 CH

R274 1.2K

TP2

TP9

Q102 JC501-R

12V

2.2V

R110 100

1.5V

R108

R139 330

R140 330

TP3

TP4

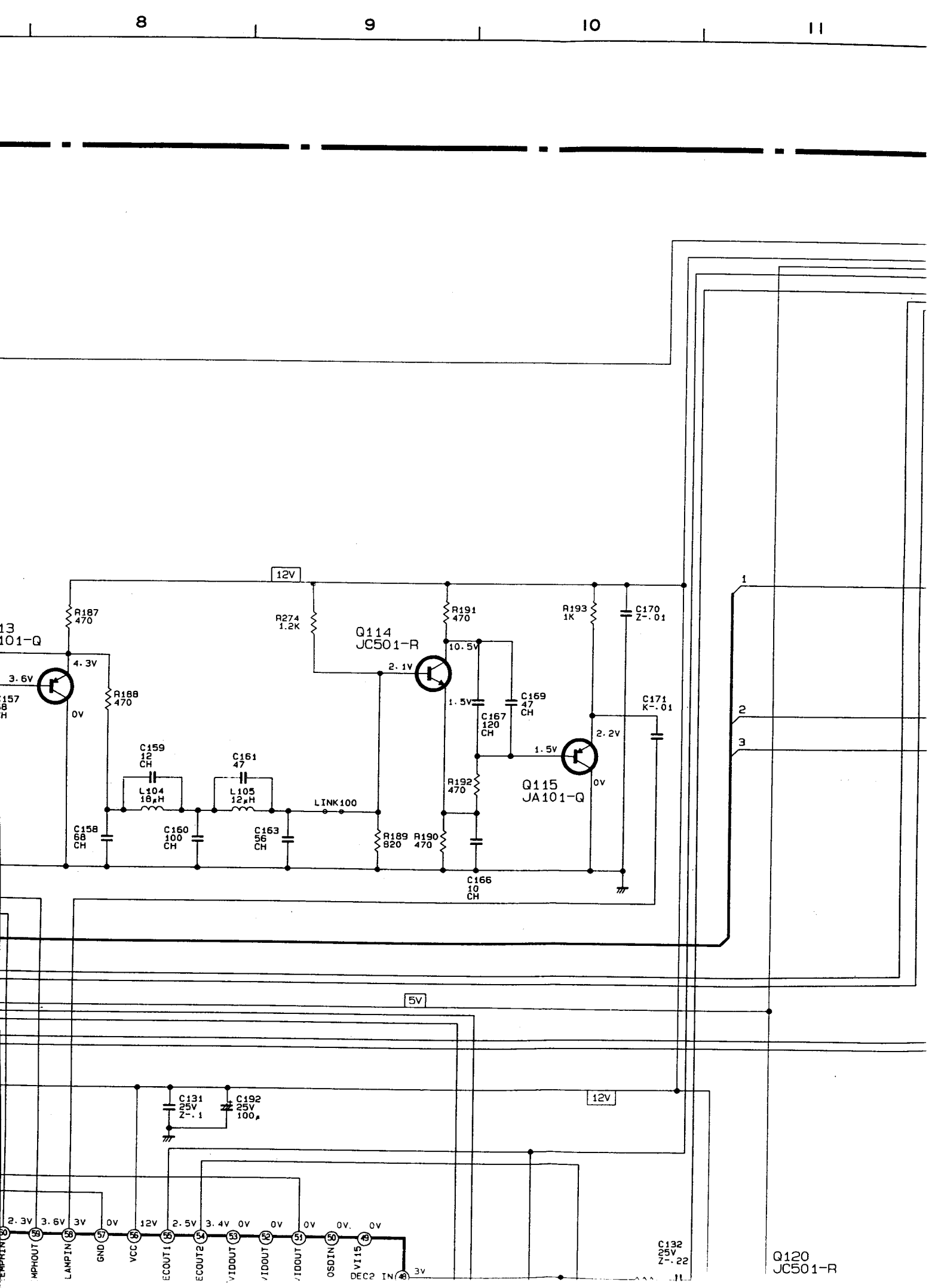
C131 25V Z-.1

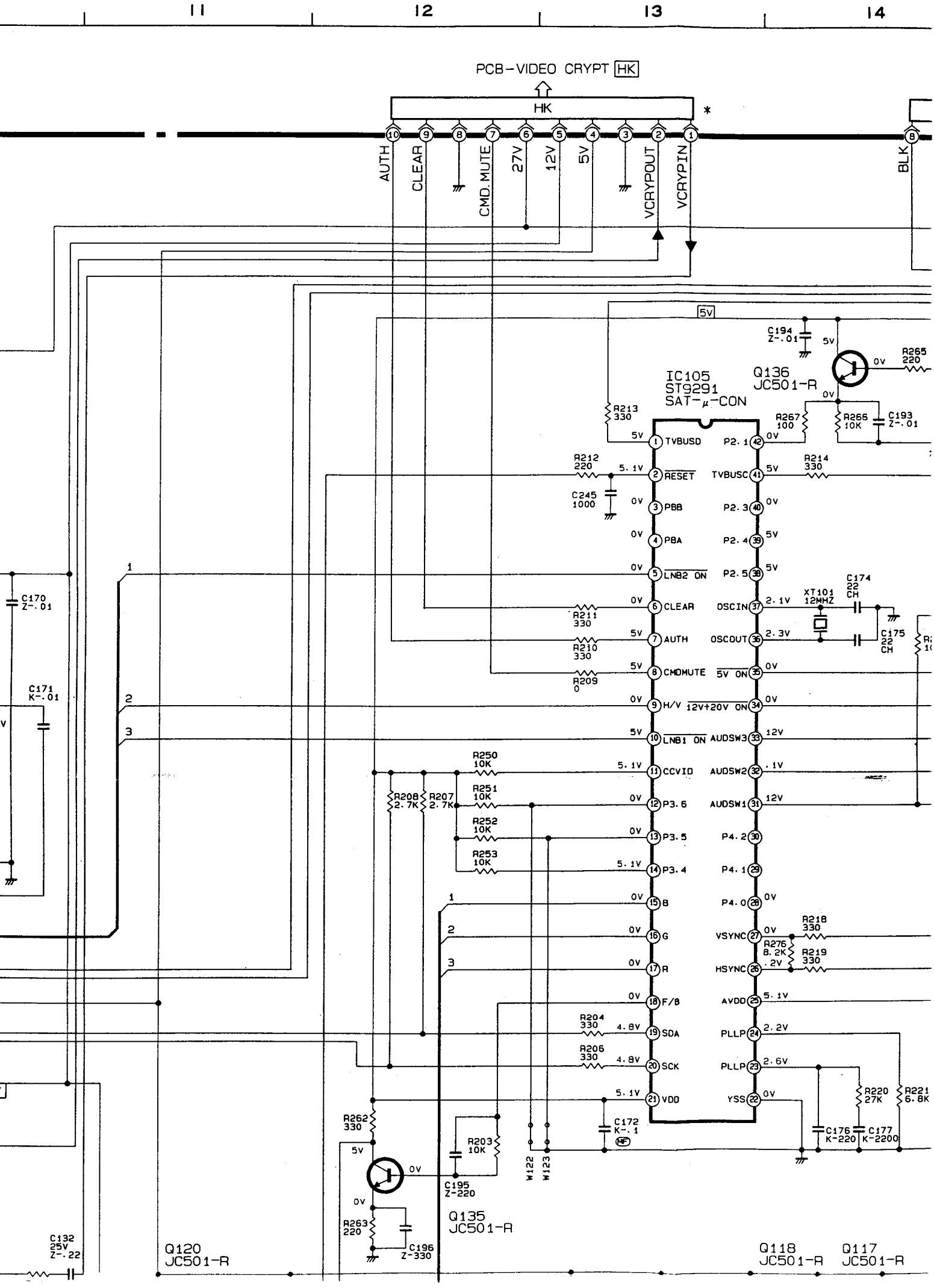
C192 25V 100μ

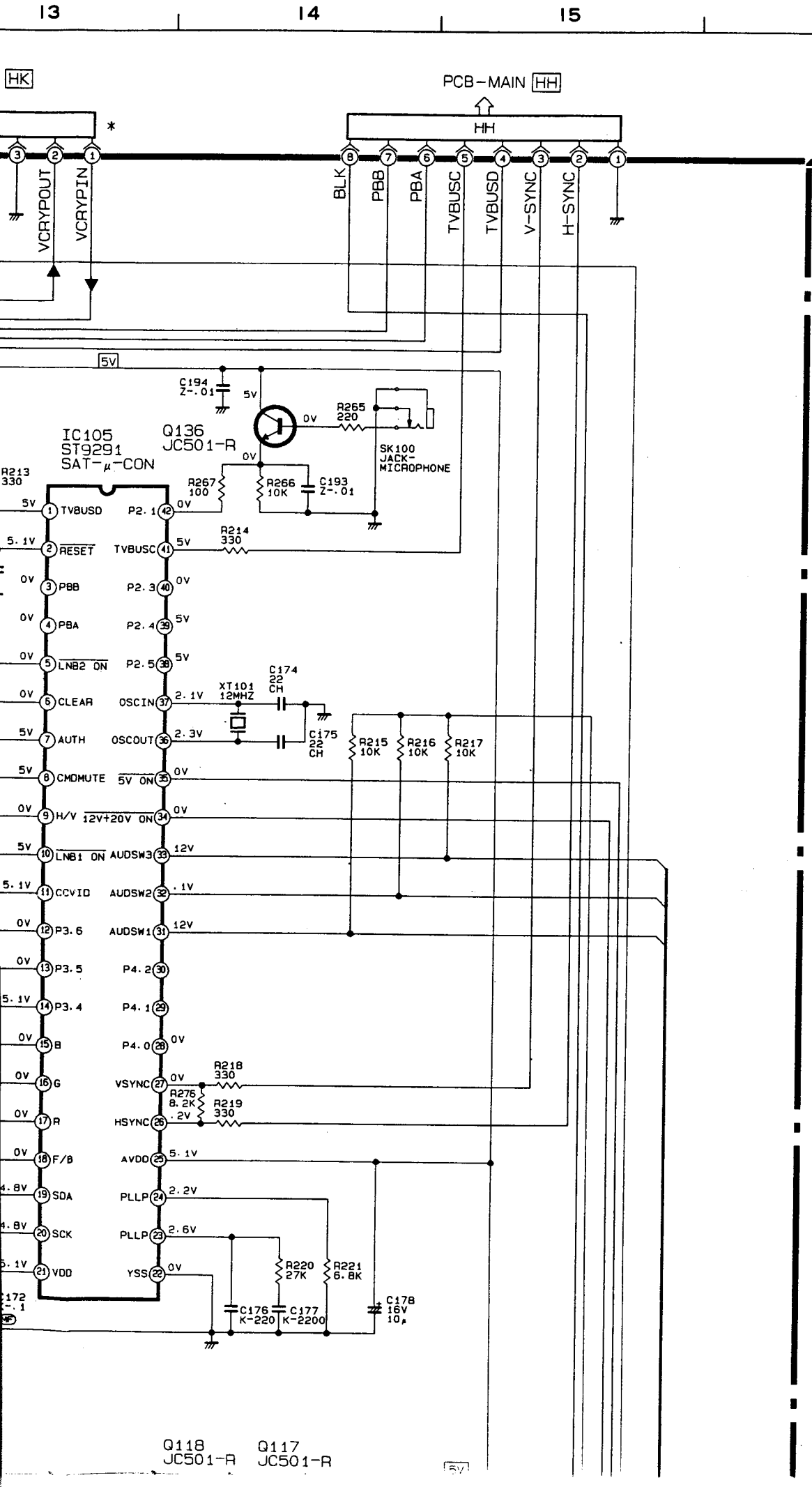
4.8V 4.8V 0V 0V 2.3V 3.6V 3V 0V 12V 2.5V 3.4V 0V 0V 0V 0V

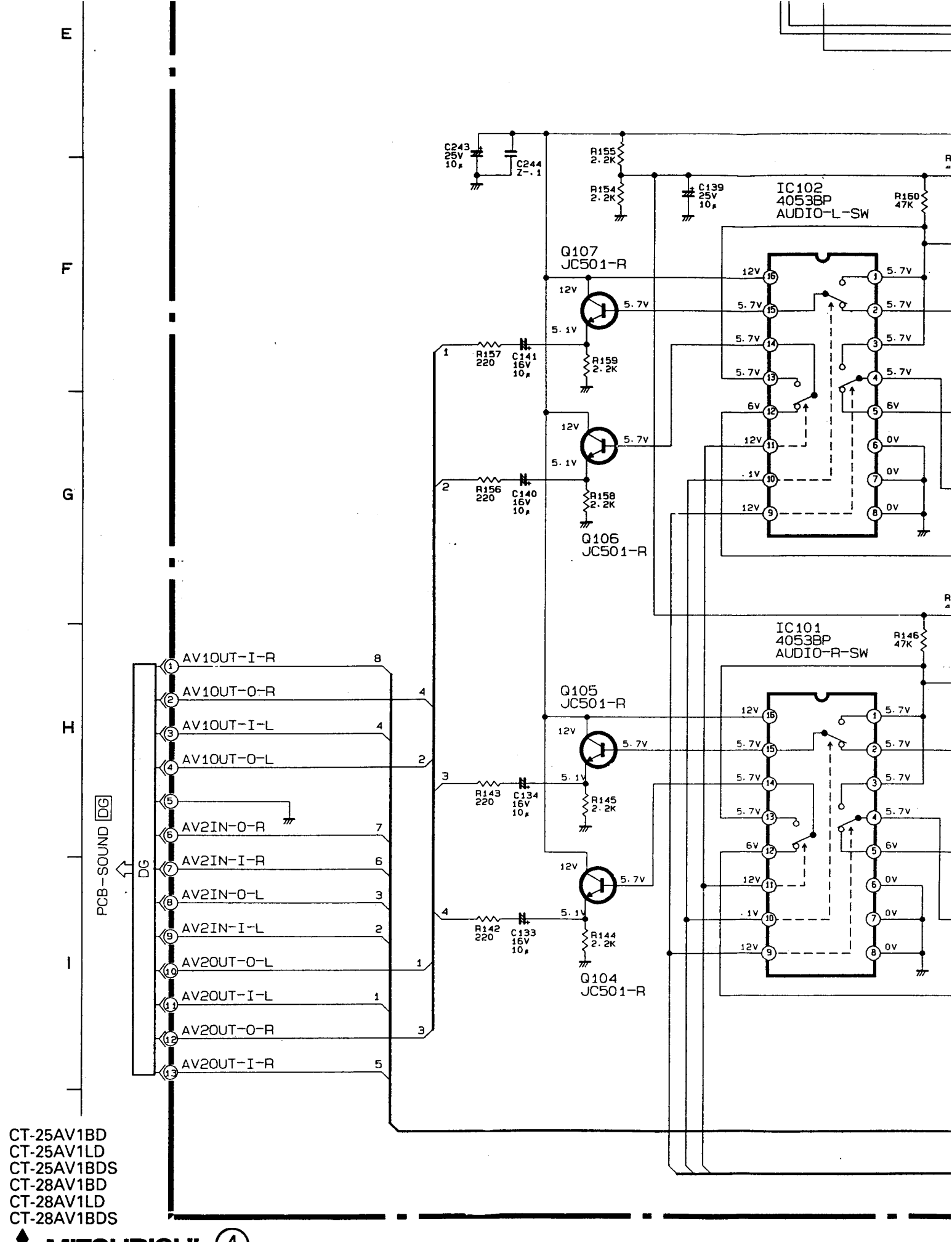
64 SDA 63 SCL 62 GND 61 VIDIN 60 DEEMPHIN 59 DEEMPHOUT 58 CLAMPIN 57 GND 56 VCC 55 DECOUT1 54 DECOUT2 53 1VIDOUT 52 2VIDOUT 51 3VIDOUT 50 OSDIN 49 DEC

0V 1 GND


8
9
10
11
12V
R187
470
4.3V
3.6V
0V
R188
470
C159
12
CH
C161
47
L104
18μH
L105
12μH
LINK100
C158
68
CH
C160
100
CH
C163
56
CH
R274
1.2K
Q114
JC501-R
2.1V
R191
470
10.5V
1.5V
C167
120
CH
C169
47
CH
R192
470
R189
820
R190
470
C166
10
CH
R193
1K
C170
Z-.01
C171
K-.01
2.2V
1.5V
Q115
JA101-Q
0V
1
2
3
5V
12V
C131
25V
Z-.1
C192
25V
100μ
2.3V
3.6V
3V
0V
12V
2.5V
3.4V
0V
0V
0V
0V.
0V
3V
GND
VCC
LAMPIN
VIDOUT
OSDIN
VI15
DEC2 IN
C132
25V
Z-.22
Q120
JC501-R

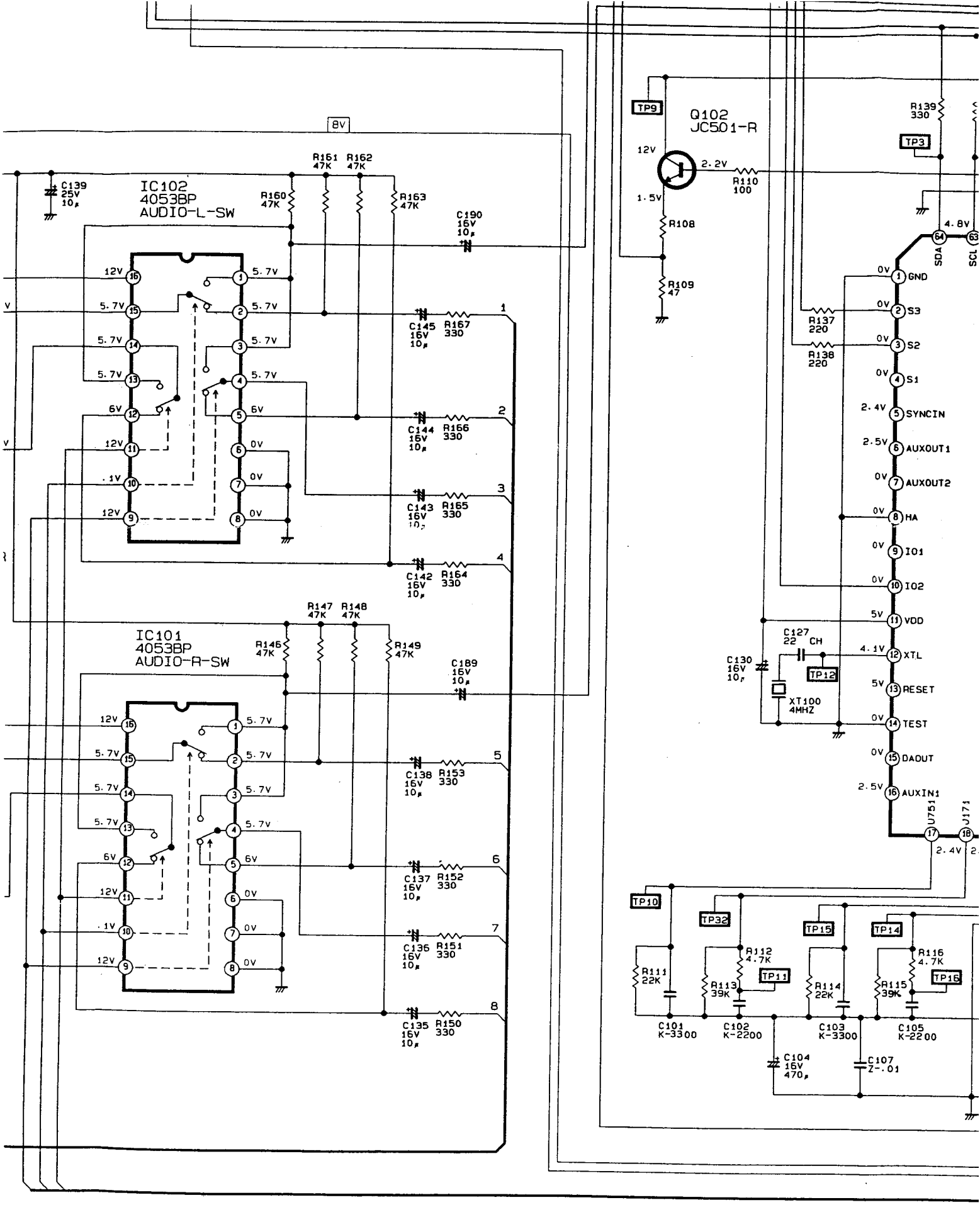

11
12
13
14
PCB-VIDEO CRYPT HK
HK
AUTH
CLEAR
CMD.MUTE
27V
12V
5V
VCRYPOUT
VCRYPIN
BLK
5V
IC105
ST9291
SAT-μ-CON
Q136
JC501-R
TVBUSD
RESET
PBB
PBA
LNB2 ON
CLEAR
AUTH
CMDMUTE
H/V
LNB1 ON
CCVID
P3.6
P3.5
P3.4
B
G
R
F/B
SDA
SCK
VDD
P2.1
TVBUSC
P2.3
P2.4
P2.5
OSCIN
OSCOUT
5V ON
12V+20V ON
AUDSW3
AUDSW2
AUDSW1
P4.2
P4.1
P4.0
VSYNC
HSYNC
AVDD
PLLP
PLLP
YSS
XT101
12MHZ
R213 330
R212 220
C245 1000
R211 330
R210 330
R209 0
R250 10K
R251 10K
R252 10K
R253 10K
R208 2.7K
R207 2.7K
R204 330
R206 330
R218 330
R276 8.2K
R219 330
R220 27K
R221 6.8K
R214 330
R265 220
R267 100
R266 10K
C194 Z-.01
C193 Z-.01
C174 22 CH
C175 22 CH
C176 K-220
C177 K-2200
C172 K-.1
C170 Z-.01
C171 K-.01
C132 25V Z-.22
R262 330
R263 220
R203 10K
C195 Z-220
C196 Z-330
W122
W123
Q135
JC501-R
Q120
JC501-R
Q118
JC501-R
Q117
JC501-R

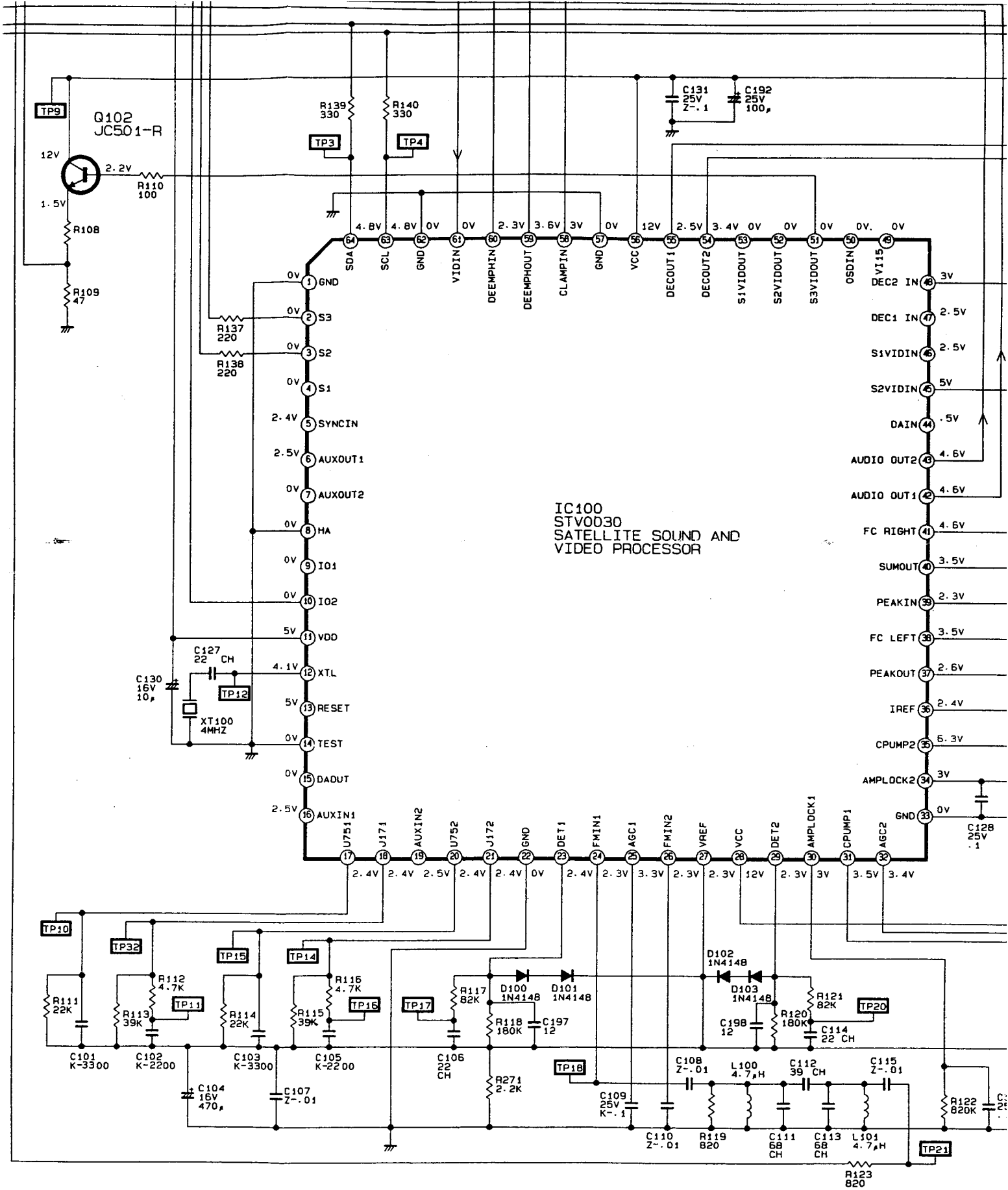

13
14
15
16
HK
PCB－MAIN HH
HH
VCRYPOUT
VCRYPIN
BLK
PBB
PBA
TVBUSC
TVBUSD
V-SYNC
H-SYNC
5V
C194 Z-.01
Q136 JC501-R
R265 220
SK100 JACK-MICROPHONE
IC105 ST9291 SAT-μ-CON
R267 100
R266 10K
C193 Z-.01
R213 330
R214 330
TVBUSD
RESET
TVBUSC
PBB
PBA
LNB2 ON
CLEAR
AUTH
CMDMUTE
H/V
LNB1 ON
CCVID
P3.6
P3.5
P3.4
B
G
R
F/B
SDA
SCK
VDD
P2.1
P2.3
P2.4
P2.5
OSCIN
OSCOUT
5V ON
12V+20V ON
AUDSW3
AUDSW2
AUDSW1
P4.2
P4.1
P4.0
VSYNC
HSYNC
AVDD
PLLP
PLLP
YSS
XT101 12MHZ
C174 22 CH
C175 22 CH
R215 10K
R216 10K
R217 10K
R218 330
R276 8.2K
R219 330
R220 27K
R221 6.8K
C176 K-220
C177 K-2200
C178 16V 10μ
Q118 JC501-R
Q117 JC501-R

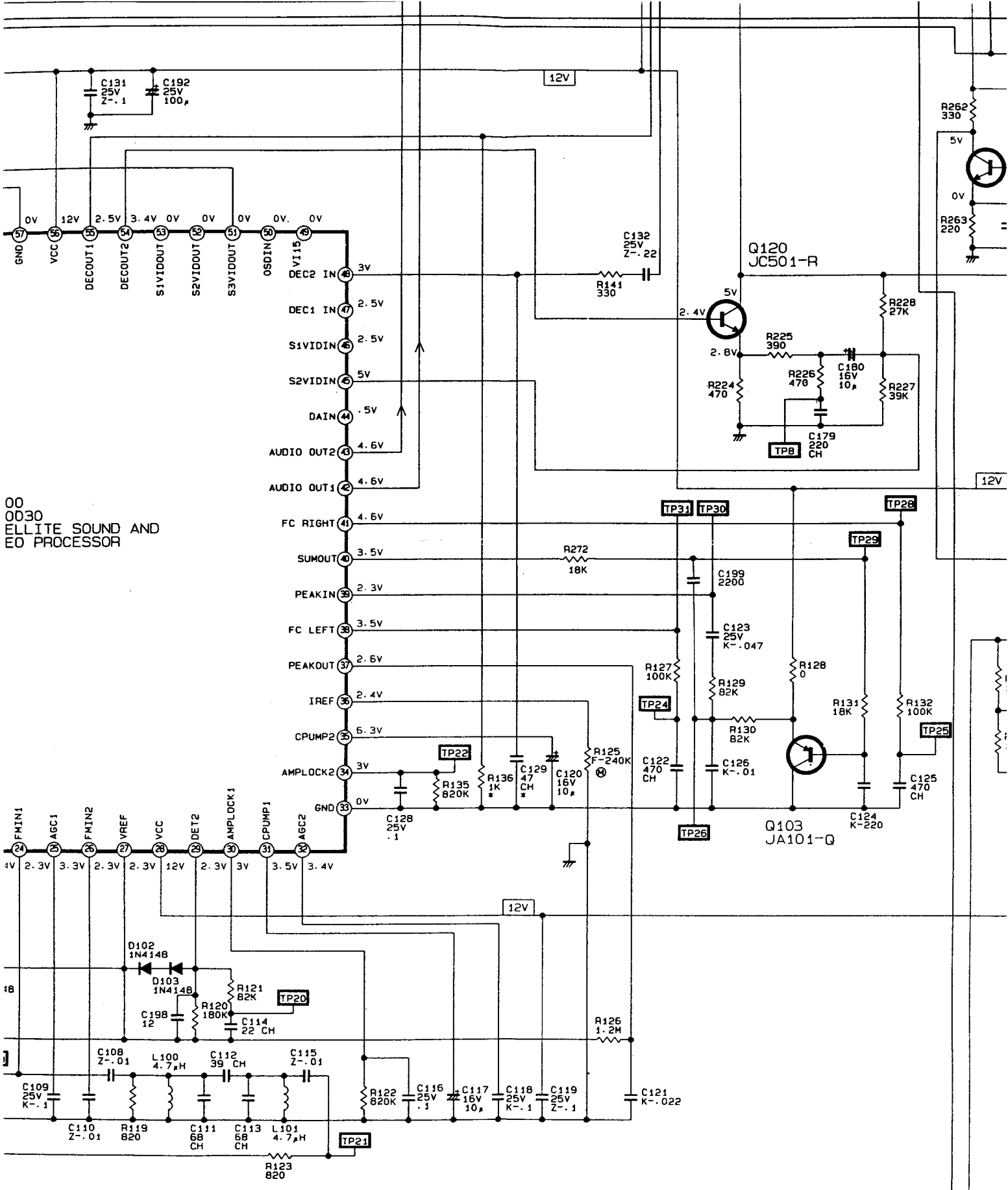


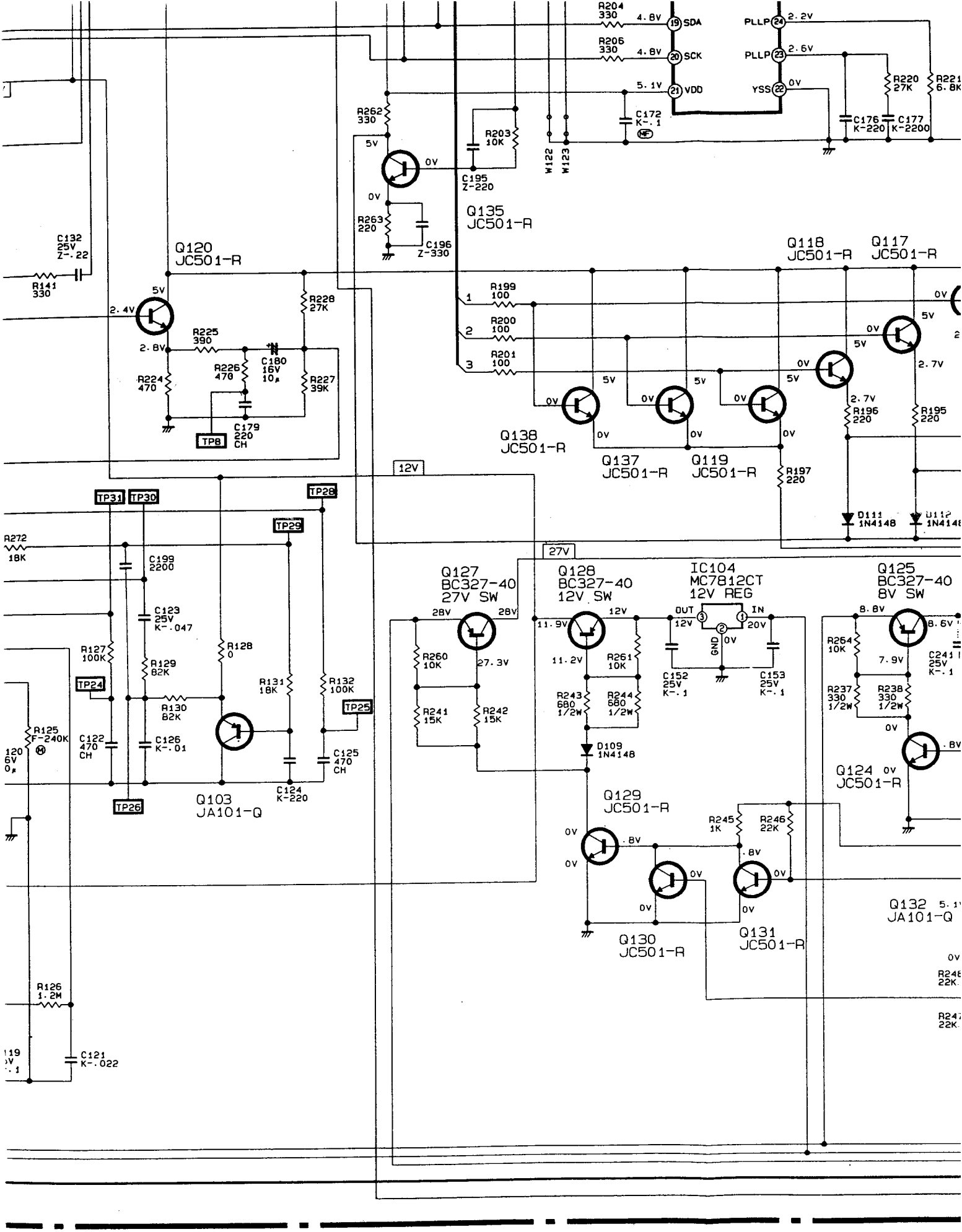
CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS

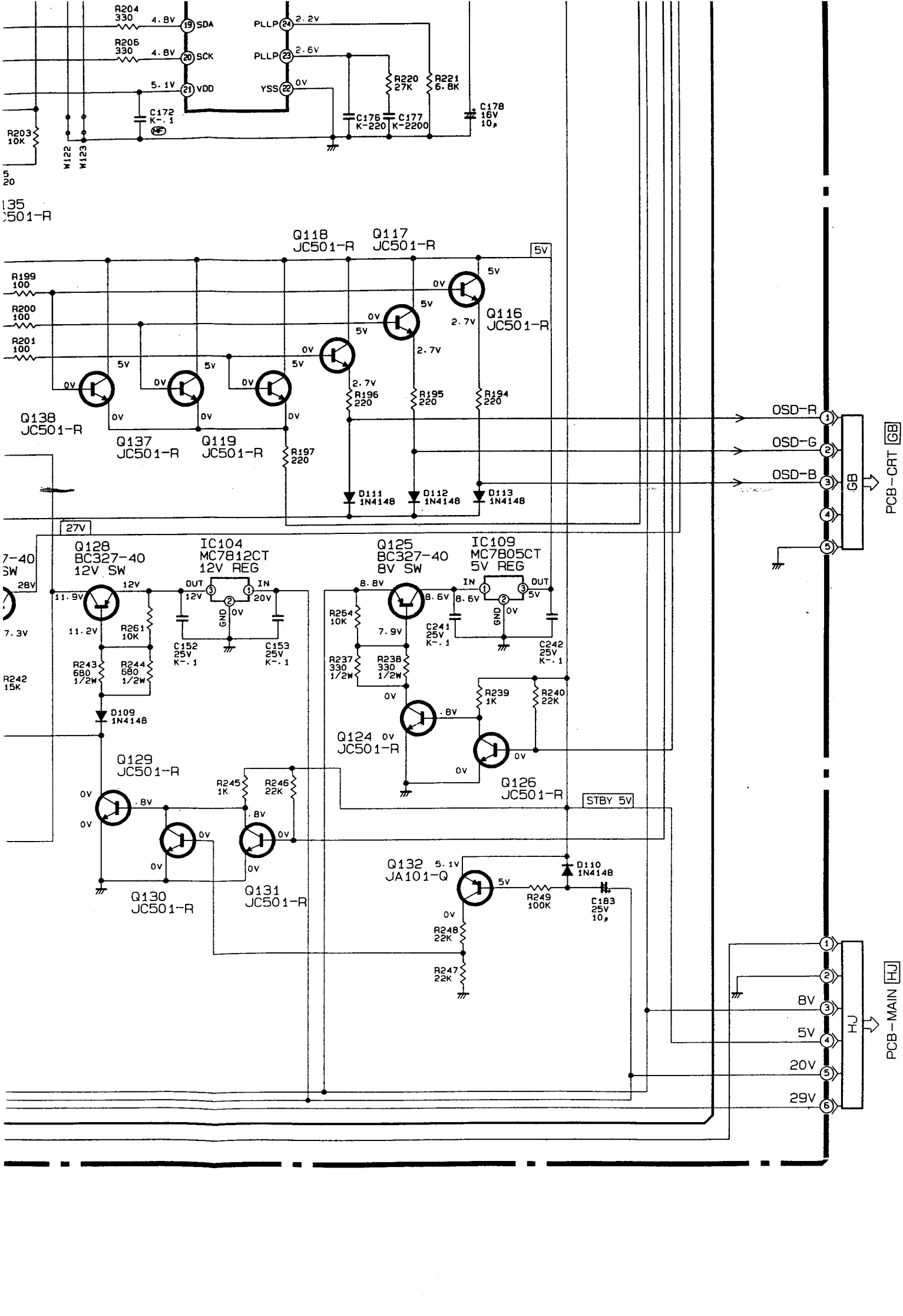
MITSUBISHI ④

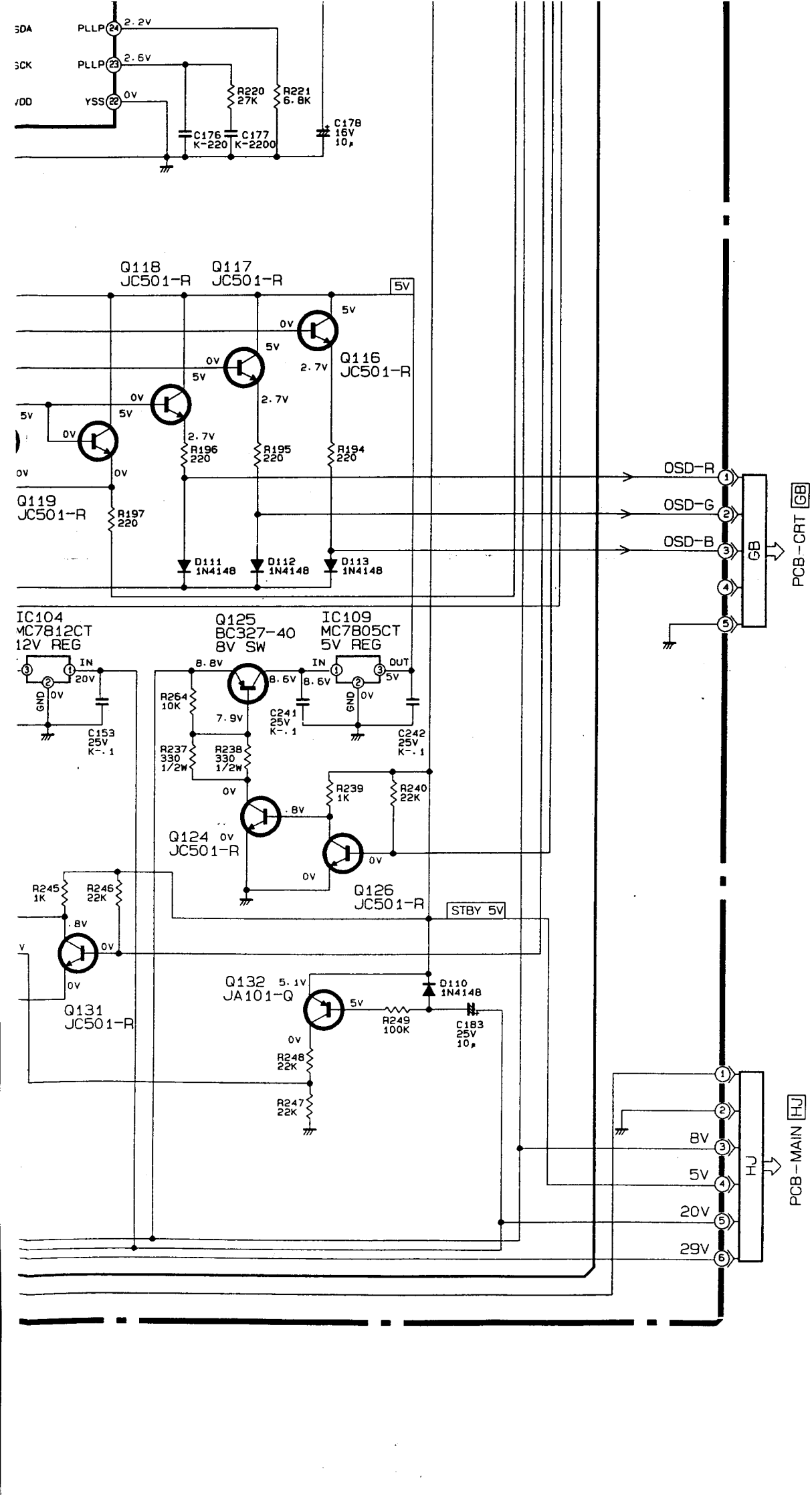

8V
IC102
4053BP
AUDIO-L-SW
IC101
4053BP
AUDIO-R-SW
Q102
JC501-R
TP9
TP3
TP10
TP32
TP15
TP14
TP11
TP16
TP12
R139 330
R110 100
R108
R109 47
R137 220
R138 220
R160 47K
R161 47K
R162 47K
R163 47K
R146 47K
R147 47K
R148 47K
R149 47K
R167 330
R166 330
R165 330
R164 330
R153 330
R152 330
R151 330
R150 330
C139 25V 10μ
C190 16V 10μ
C189 16V 10μ
C145 16V 10μ
C144 16V 10μ
C143 16V 10μ
C142 16V 10μ
C138 16V 10μ
C137 16V 10μ
C136 16V 10μ
C135 16V 10μ
C127 22 CH
C130 16V 10μ
XT100 4MHZ
R111 22K
R112 4.7K
R113 39K
R114 22K
R115 39K
R116 4.7K
C101 K-3300
C102 K-2200
C103 K-3300
C105 K-2200
C104 16V 470μ
C107 Z-.01
GND
S3
S2
S1
SYNCIN
AUXOUT1
AUXOUT2
HA
IO1
IO2
VDD
XTL
RESET
TEST
DAOUT
AUXIN1
SDA
SCL
U751
J173

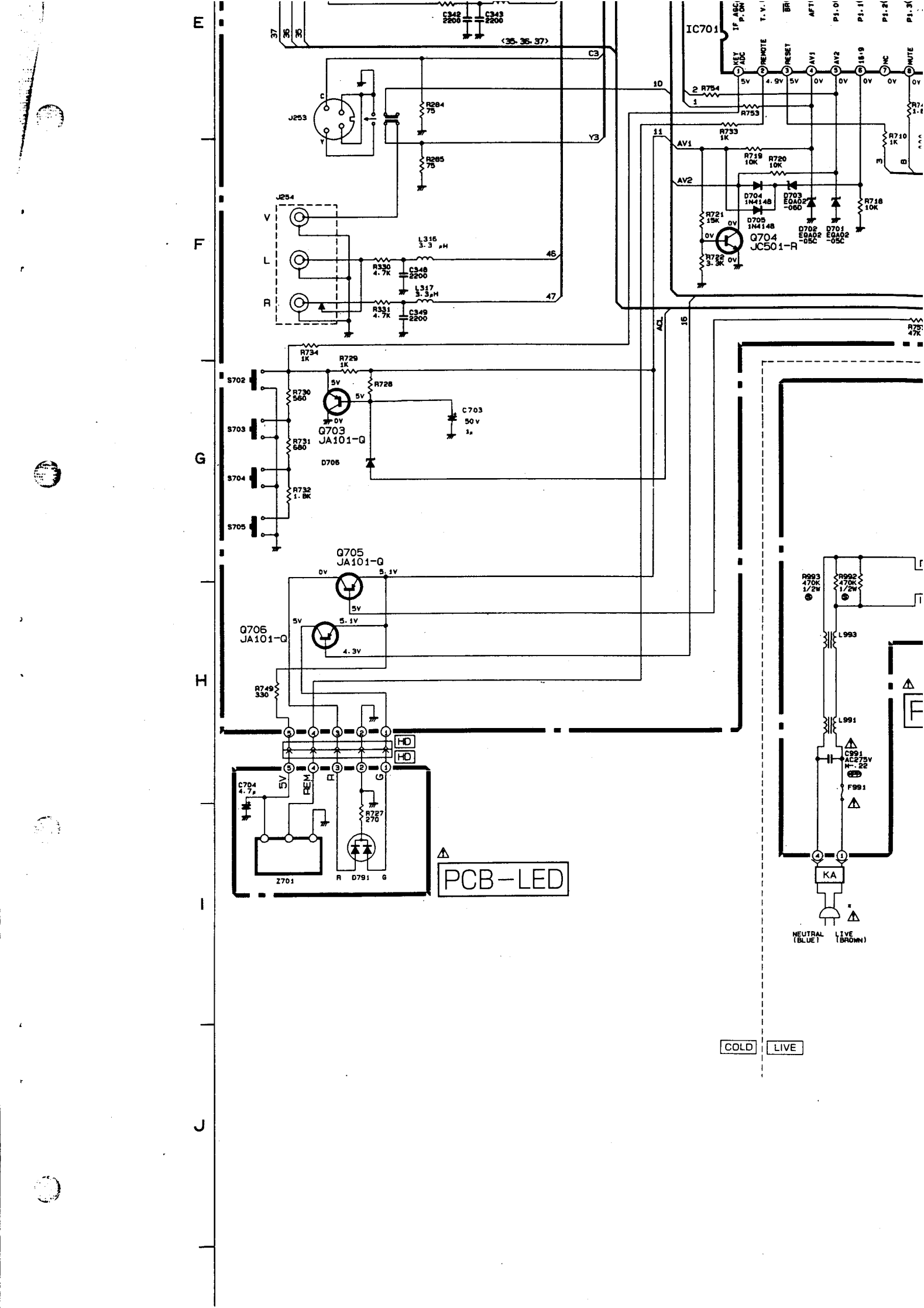

IC100
STV0030
SATELLITE SOUND AND
VIDEO PROCESSOR
Q102
JC501-R
TP9
12V
2.2V
1.5V
R108
R109
47
R110
100
R139
330
R140
330
TP3
TP4
C131
25V
Z-.1
C192
25V
100µ
R137
220
R138
220
XT100
4MHZ
C127
22 CH
C130
16V
10µ
TP12
SDA
SCL
GND
VIDIN
DEEMPHIN
DEEMPHOUT
CLAMPIN
GND
VCC
DECOUT1
DECOUT2
S1VIDOUT
S2VIDOUT
S3VIDOUT
OSDIN
YI15
GND
S3
S2
S1
SYNCIN
AUXOUT1
AUXOUT2
HA
IO1
IO2
VDD
XTL
RESET
TEST
DADOUT
AUXIN1
DEC2 IN
DEC1 IN
S1VIDIN
S2VIDIN
DAIN
AUDIO OUT2
AUDIO OUT1
FC RIGHT
SUMOUT
PEAKIN
FC LEFT
PEAKOUT
IREF
CPUMP2
AMPLOCK2
GND
C128
25V
.1
U751
U171
AUXIN2
U752
U172
GND
DET1
FMIN1
AGC1
FMIN2
VREF
VCC
DET2
AMPLOCK1
CPUMP1
AGC2
TP10
TP32
TP15
TP14
TP11
TP16
TP17
TP18
TP20
TP21
R111
22K
R112
4.7K
R113
39K
R114
22K
R115
39K
R116
4.7K
C101
K-3300
C102
K-2200
C103
K-3300
C105
K-2200
C104
16V
470µ
C107
Z-.01
R117
82K
D100
1N4148
D101
1N4148
R118
180K
C197
12
C106
22
CH
R271
2.2K
D102
1N4148
D103
1N4148
R121
82K
R120
180K
C198
12
C114
22 CH
C108
Z-.01
L100
4.7µH
C112
39 CH
C115
Z-.01
C109
25V
K-.1
C110
Z-.01
R119
820
C111
68
CH
C113
68
CH
L101
4.7µH
R123
820
R122
820K

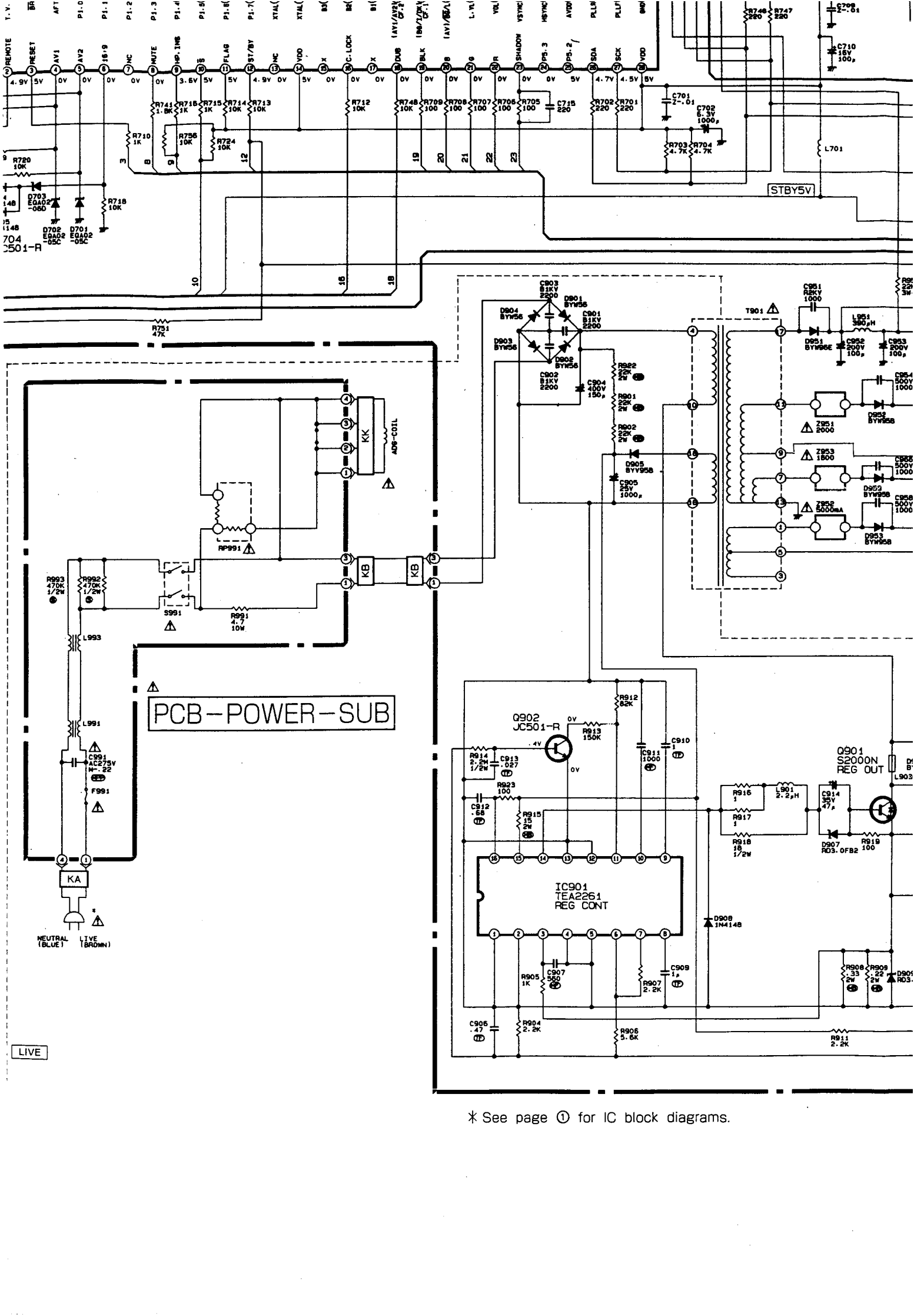

00
0030
ELLITE SOUND AND
EO PROCESSOR
12V
C131 25V Z-.1
C192 25V 100µ
C132 25V Z-.22
R141 330
Q120 JC501-R
R262 330
R263 220
R228 27K
R225 390
R224 470
R226 470
C180 16V 10µ
R227 39K
C179 220 CH
TP8
TP31
TP30
TP28
TP29
TP24
TP25
TP26
R272 18K
C199 2200
C123 25V K-.047
R127 100K
R129 82K
R128 0
R131 18K
R132 100K
R130 82K
C122 470 CH
C126 K-.01
C125 470 CH
C124 K-220
Q103 JA101-Q
C128 25V .1
R135 820K
R136 1K *
C129 47 CH *
C120 16V 10µ
R125 F-240K
TP22
TP20
TP21
D102 1N4148
D103 1N4148
R121 82K
R120 180K
C198 12
C114 22 CH
R126 1.2M
C108 Z-.01
L100 4.7µH
C112 39 CH
C115 Z-.01
C109 25V K-.1
C110 Z-.01
R119 820
C111 68 CH
C113 68 CH
L101 4.7µH
R123 820
R122 820K
C116 25V .1
C117 16V 10µ
C118 25V K-.1
C119 25V Z-.1
C121 K-.022
GND 0V
VCC 12V
DECOUT1 2.5V
DECOUT2 3.4V
S1VIDOUT 0V
S2VIDOUT 0V
S3VIDOUT 0V
OSDIN 0V.
VI15 0V
DEC2 IN 3V
DEC1 IN 2.5V
S1VIDIN 2.5V
S2VIDIN 5V
DAIN .5V
AUDIO OUT2 4.6V
AUDIO OUT1 4.6V
FC RIGHT 4.6V
SUMOUT 3.5V
PEAKIN 2.3V
FC LEFT 3.5V
PEAKOUT 2.6V
IREF 2.4V
CPUMP2 6.3V
AMPLOCK2 3V
GND 0V
FMIN1 2.3V
AGC1 3.3V
FMIN2 2.3V
VREF 2.3V
VCC 12V
DET2 2.3V
AMPLOCK1 3V
CPUMP1 3.5V
AGC2 3.4V


R204 330
4.8V
19 SDA
R206 330
4.8V
20 SCK
5.1V
21 VDD
PLLP 24
2.2V
PLLP 23
2.6V
YSS 22
0V
R220 27K
R221 6.8K
C172 K-.1 NF
C176 K-220
C177 K-2200
R262 330
5V
0V
R203 10K
C195 Z-220
W122
W123
Q135 JC501-R
R263 220
C196 Z-330
C132 25V Z-.22
R141 330
Q120 JC501-R
5V
2.4V
R228 27K
R225 390
2.8V
R226 470
C180 16V 10μ
R224 470
R227 39K
TP8
C179 220 CH
Q118 JC501-R
Q117 JC501-R
R199 100
R200 100
R201 100
Q138 JC501-R
Q137 JC501-R
Q119 JC501-R
2.7V
R196 220
R195 220
R197 220
D111 1N4148
12V
TP31
TP30
TP28
TP29
R272 18K
C199 2200
C123 25V K-.047
R127 100K
R129 82K
R128 0
TP24
R130 82K
R131 18K
R132 100K
TP25
R125 F-240K
C122 470 CH
C126 K-.01
C125 470 CH
C124 K-220
TP26
Q103 JA101-Q
27V
Q127 BC327-40 27V SW
28V
27.3V
R260 10K
R241 15K
R242 15K
Q128 BC327-40 12V SW
12V
11.9V
11.2V
R261 10K
R243 680 1/2W
R244 680 1/2W
D109 1N4148
IC104 MC7812CT 12V REG
OUT
IN
GND
20V
C152 25V K-.1
C153 25V K-.1
Q125 BC327-40 8V SW
8.8V
8.6V
R264 10K
7.9V
R237 330 1/2W
R238 330 1/2W
C241 25V K-.1
Q124 JC501-R
Q129 JC501-R
8V
R245 1K
R246 22K
Q130 JC501-R
Q131 JC501-R
Q132 JA101-Q
R126 1.2M
C121 K-.022

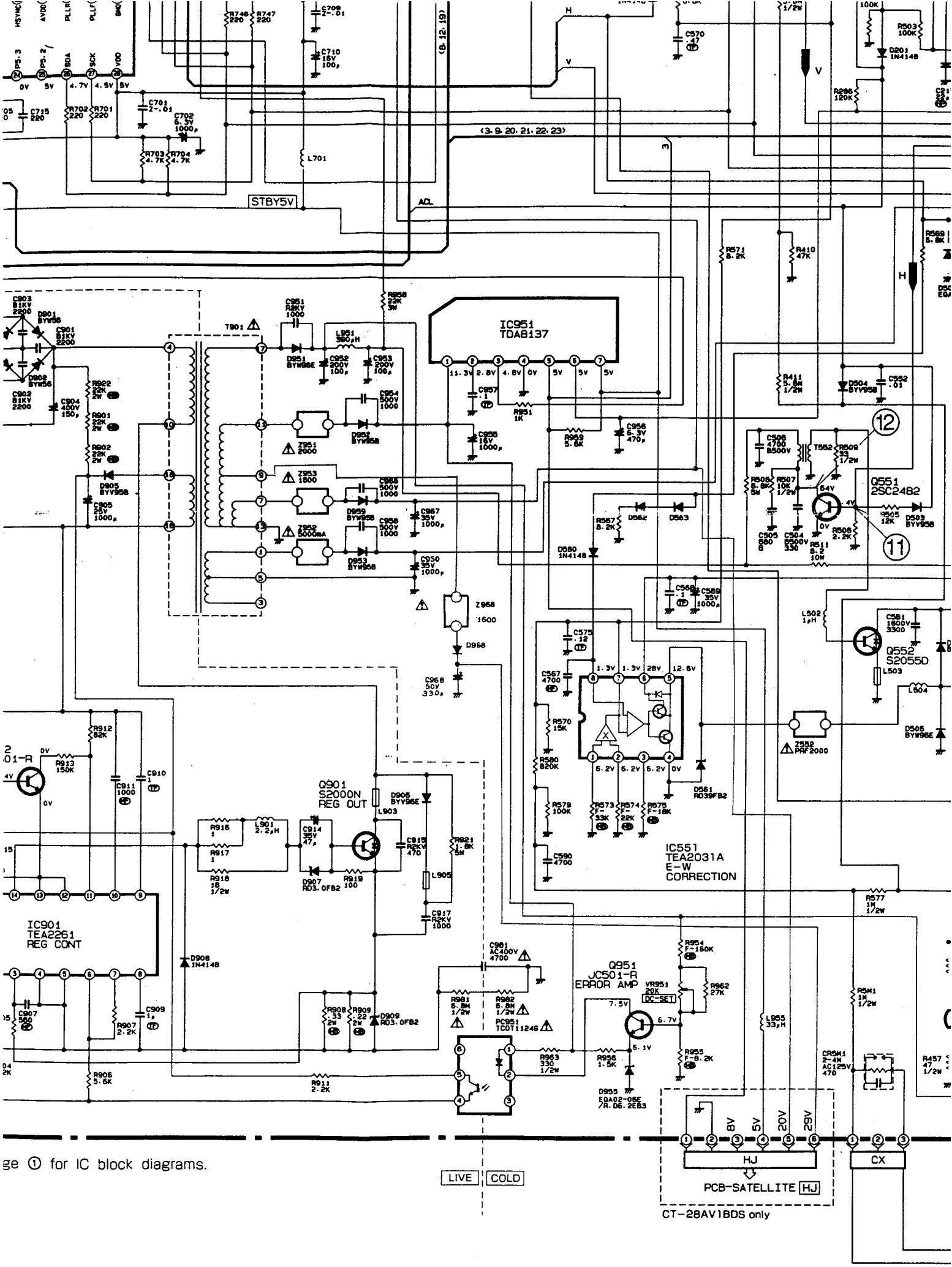

R204 330
4.8V
19 SDA
R206 330
4.8V
20 SCK
5.1V
21 VDD
PLLP 24
2.2V
PLLP 23
2.6V
YSS 22
0V
R220 27K
R221 6.8K
C178 16V 10μ
C172 K-.1
C176 K-220
C177 K-2200
R203 10K
W122
W123
Q118 JC501-R
Q117 JC501-R
5V
R199 100
R200 100
R201 100
Q116 JC501-R
2.7V
Q138 JC501-R
Q137 JC501-R
Q119 JC501-R
R196 220
R195 220
R194 220
R197 220
D111 1N4148
D112 1N4148
D113 1N4148
OSD-R
OSD-G
OSD-B
GB
PCB-CRT GB
27V
Q128 BC327-40 12V SW
IC104 MC7812CT 12V REG
12V
20V
11.9V
11.2V
R261 10K
R243 680 1/2W
R244 680 1/2W
C152 25V K-.1
C153 25V K-.1
D109 1N4148
Q125 BC327-40 8V SW
IC109 MC7805CT 5V REG
8.8V
8.6V
R264 10K
7.9V
C241 25V K-.1
C242 25V K-.1
R237 330 1/2W
R238 330 1/2W
.8V
R239 1K
R240 22K
Q124 JC501-R
Q126 JC501-R
STBY 5V
Q129 JC501-R
R245 1K
R246 22K
Q130 JC501-R
Q131 JC501-R
Q132 JA101-Q
5.1V
D110 1N4148
R249 100K
C183 25V 10μ
R248 22K
R247 22K
8V
5V
20V
29V
HJ
PCB-MAIN HJ


SDA
SCK
VDD
PLLP 24 2.2V
PLLP 23 2.6V
YSS 22 0V
R220 27K
R221 6.8K
C176 K-220
C177 K-2200
C178 16V 10μ
Q118 JC501-R
Q117 JC501-R
5V
Q116 JC501-R
2.7V
R196 220
R195 220
R194 220
Q119 JC501-R
R197 220
D111 1N4148
D112 1N4148
D113 1N4148
OSD-R
OSD-G
OSD-B
GB
PCB-CRT GB
IC104 MC7812CT 12V REG
IN
20V
GND
C153 25V K-.1
Q125 BC327-40 8V SW
8.8V
8.6V
R264 10K
7.9V
R237 330 1/2W
R238 330 1/2W
IC109 MC7805CT 5V REG
OUT
C241 25V K-.1
C242 25V K-.1
R239 1K
R240 22K
Q124 JC501-R
.8V
Q126 JC501-R
STBY 5V
R245 1K
R246 22K
Q131 JC501-R
Q132 JA101-Q
5.1V
D110 1N4148
R249 100K
C183 25V 10μ
R248 22K
R247 22K
8V
5V
20V
29V
HJ
PCB-MAIN HJ

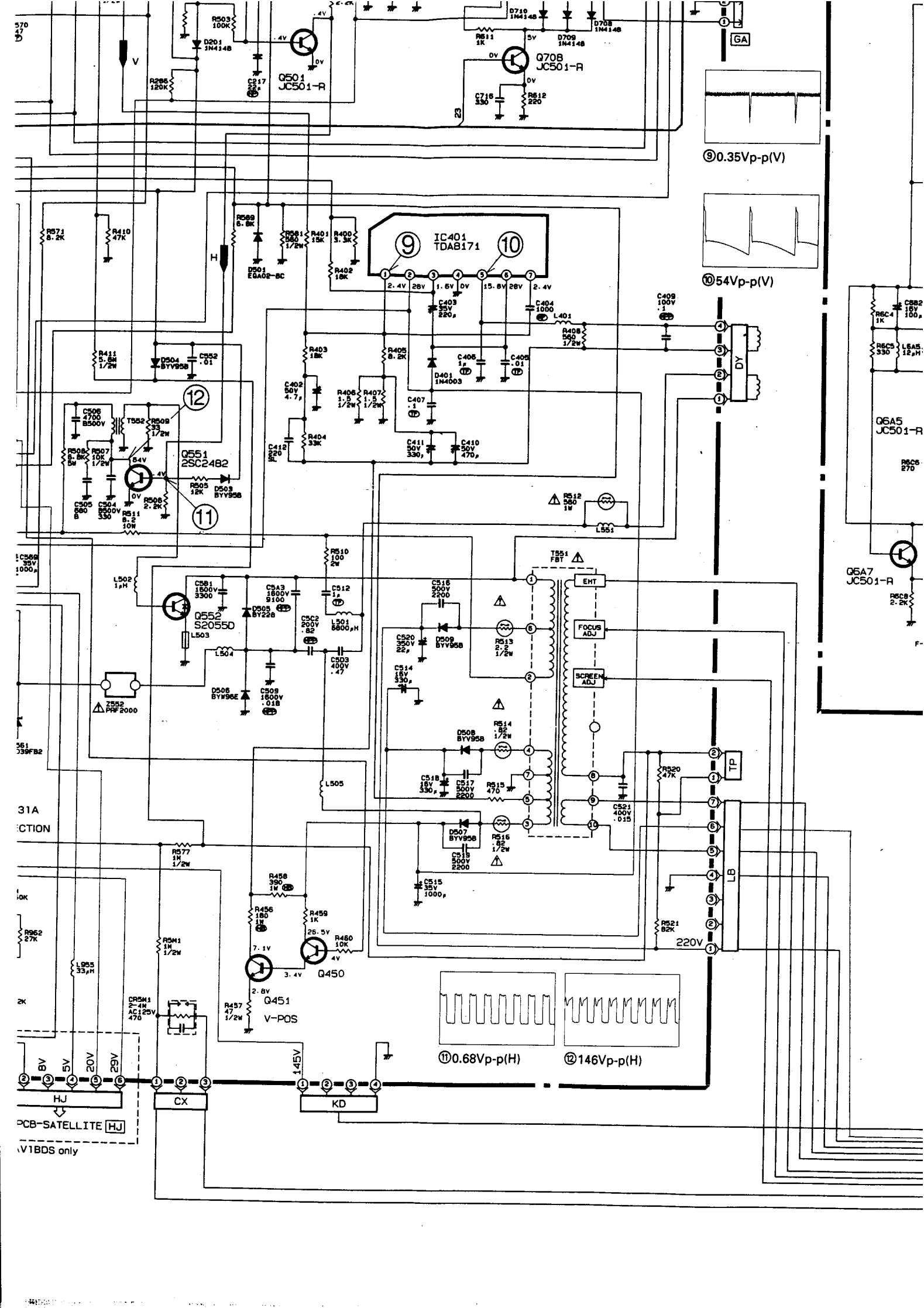

IC701
J253
J254
Q703 JA101-Q
Q704 JC501-R
Q705 JA101-Q
Q706 JA101-Q
S702
S703
S704
S705
Z701
D791
PCB-LED
HD
HD
KA
NEUTRAL (BLUE)
LIVE (BROWN)
COLD
LIVE

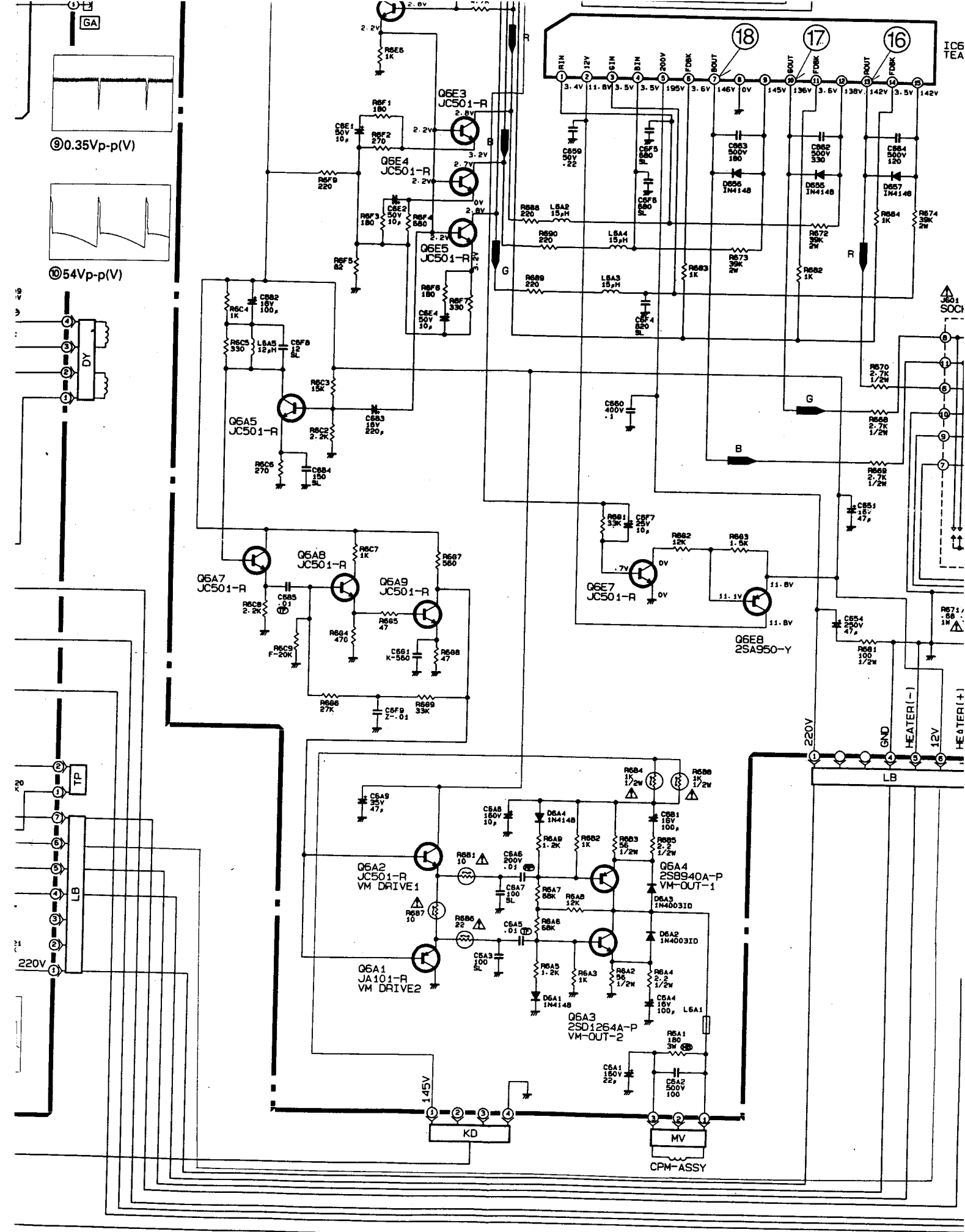


* See page ① for IC block diagrams.

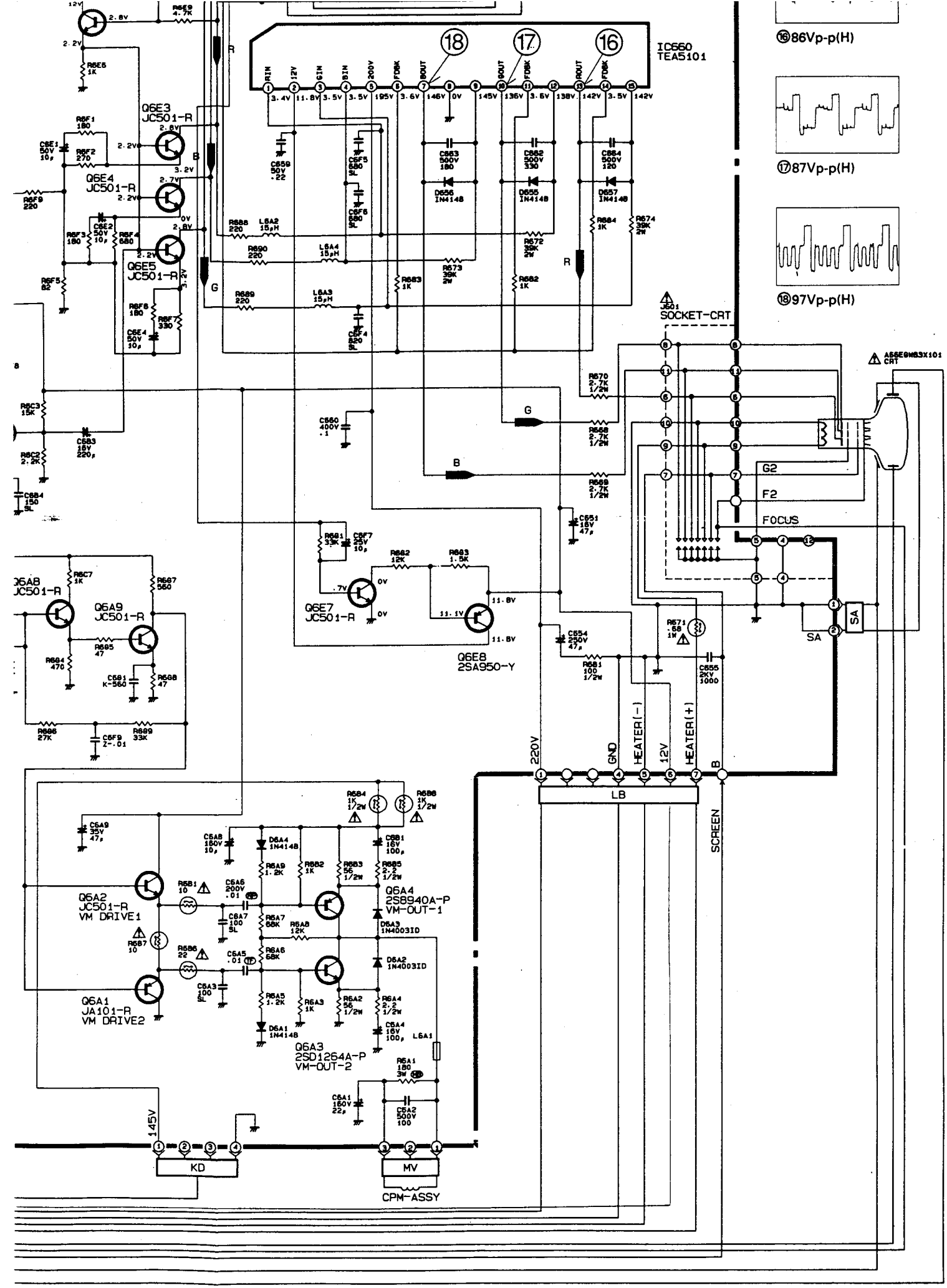


ge ① for IC block diagrams.


IC401
TDA8171
Q708
JC501-R
Q501
JC501-R
Q551
2SC2482
Q552
S2055D
Q450
Q451
V-POS
Q6A5
JC501-R
Q6A7
JC501-R
T551
FBT
EHT
FOCUS ADJ
SCREEN ADJ
DY
TP
LB
GA
HJ
CX
KD
220V
⑨0.35Vp-p(V)
⑩54Vp-p(V)
⑪0.68Vp-p(H)
⑫146Vp-p(H)
PCB-SATELLITE HJ
V1BDS only

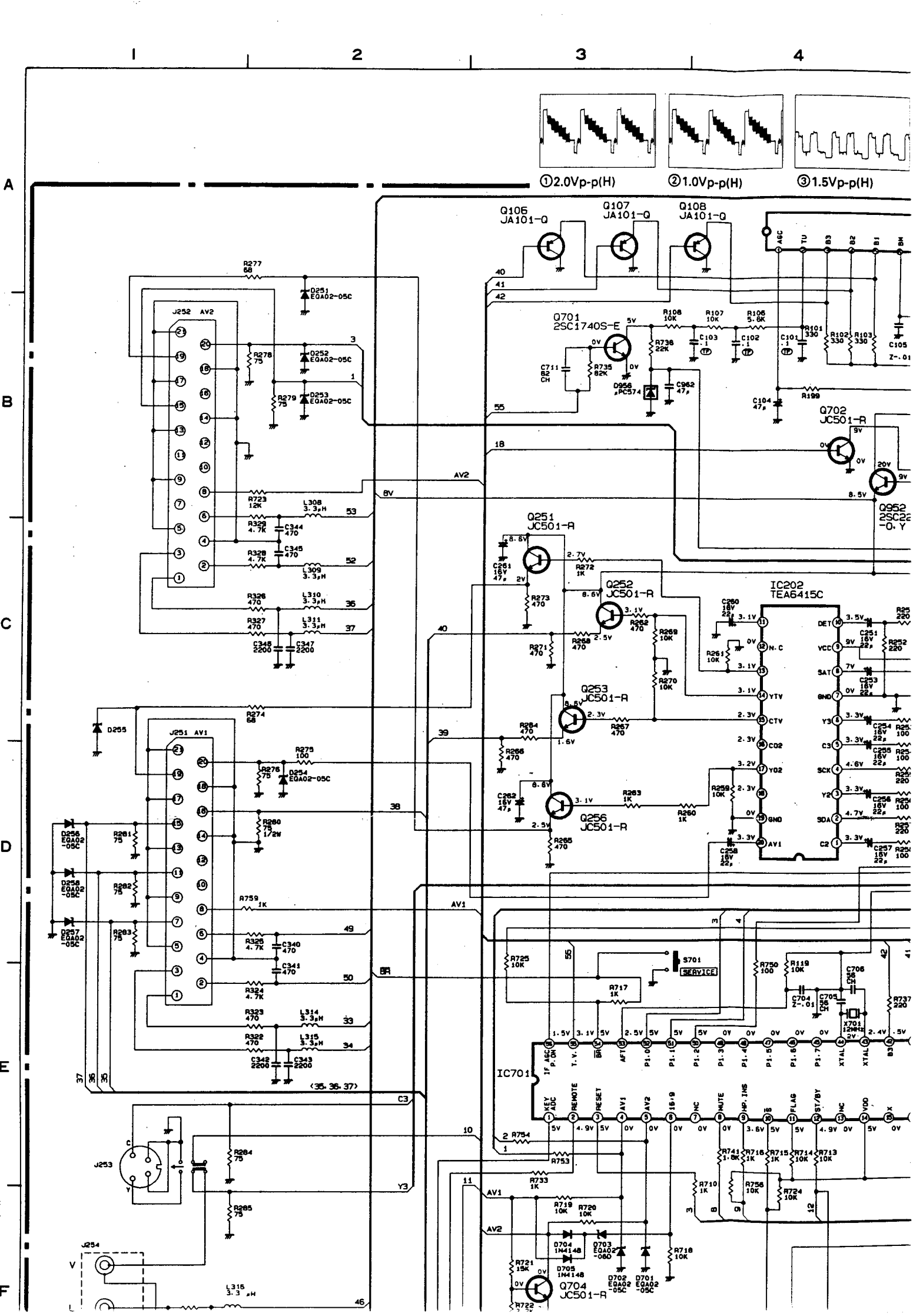


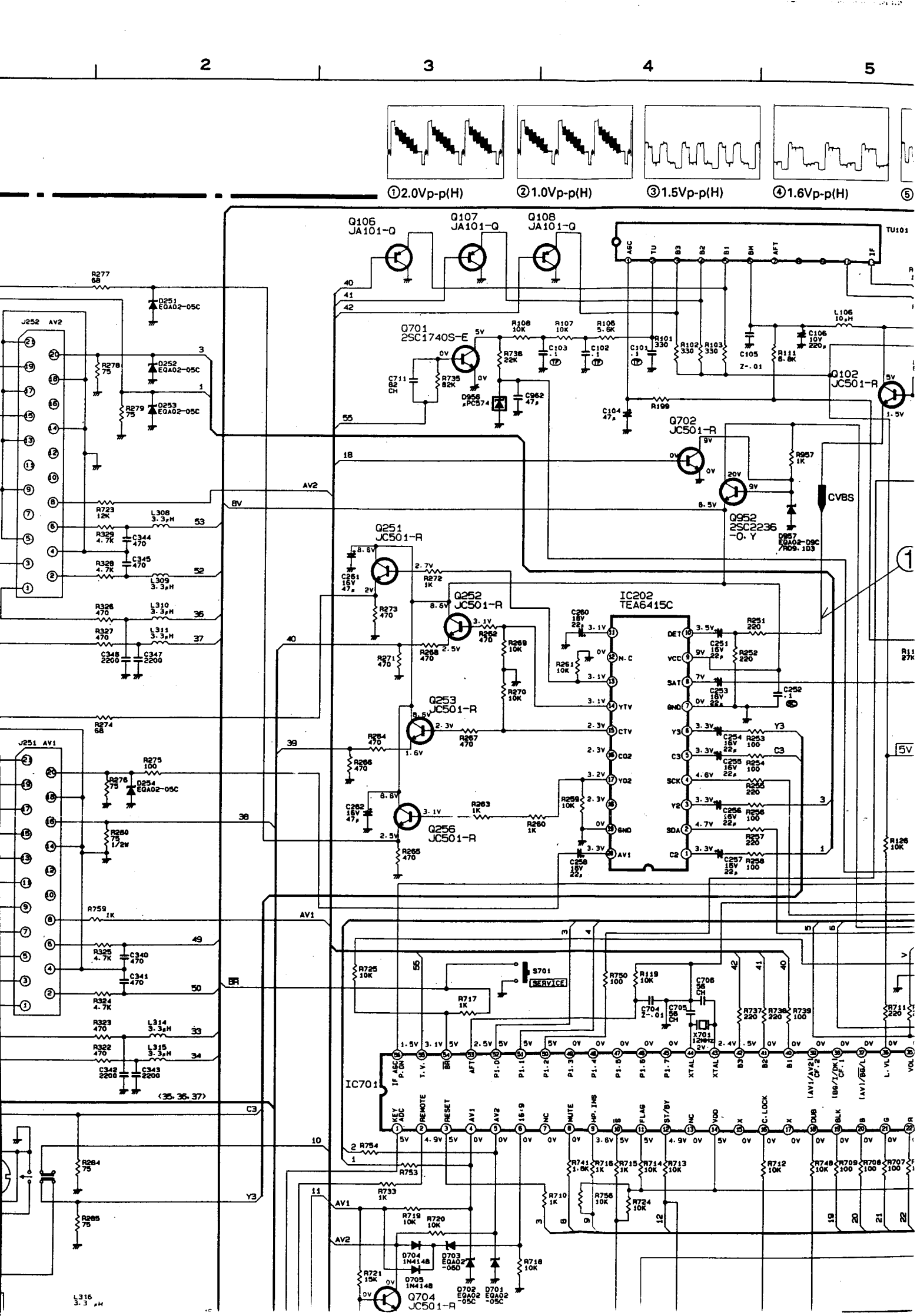
CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS

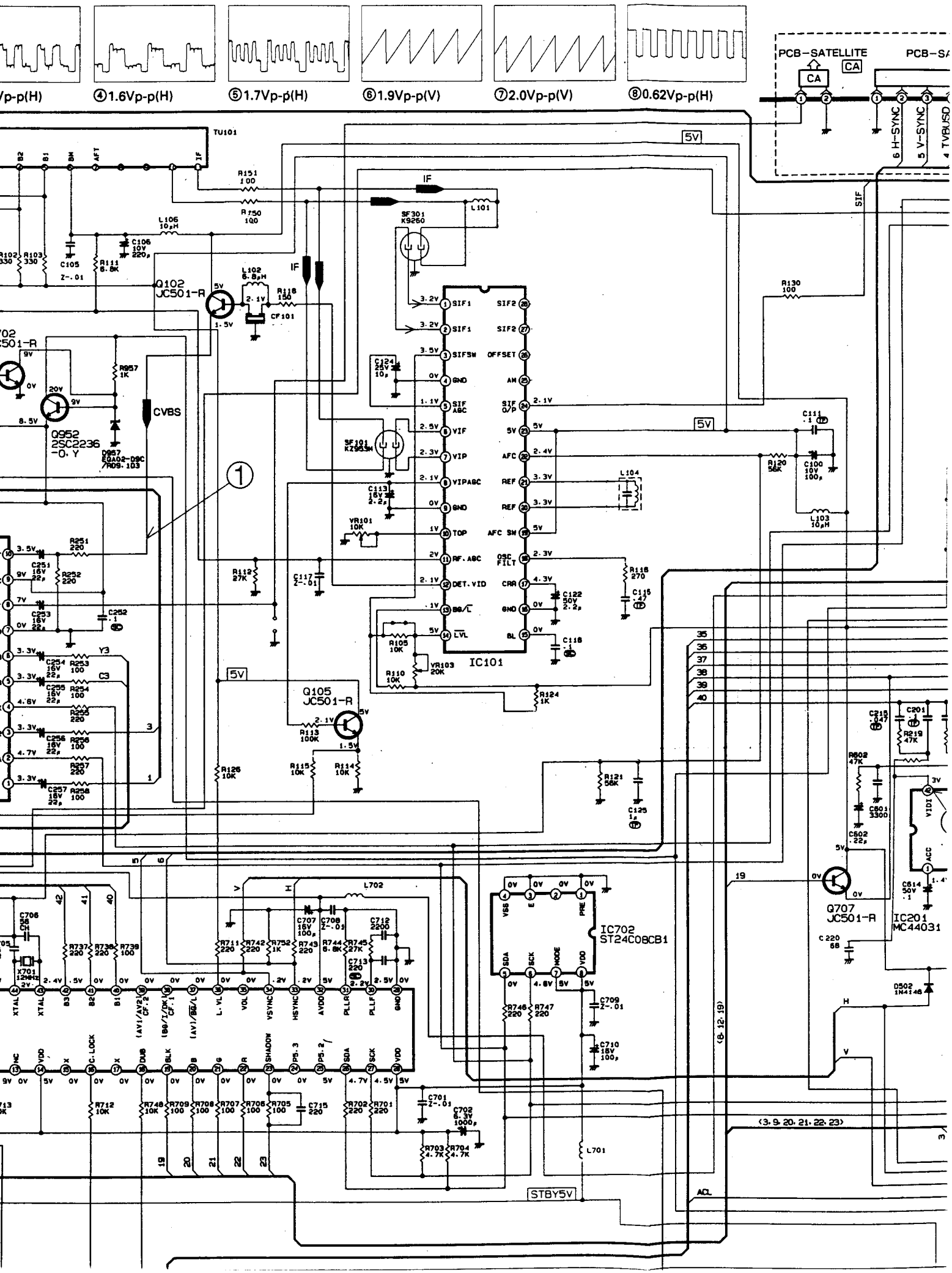


CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS

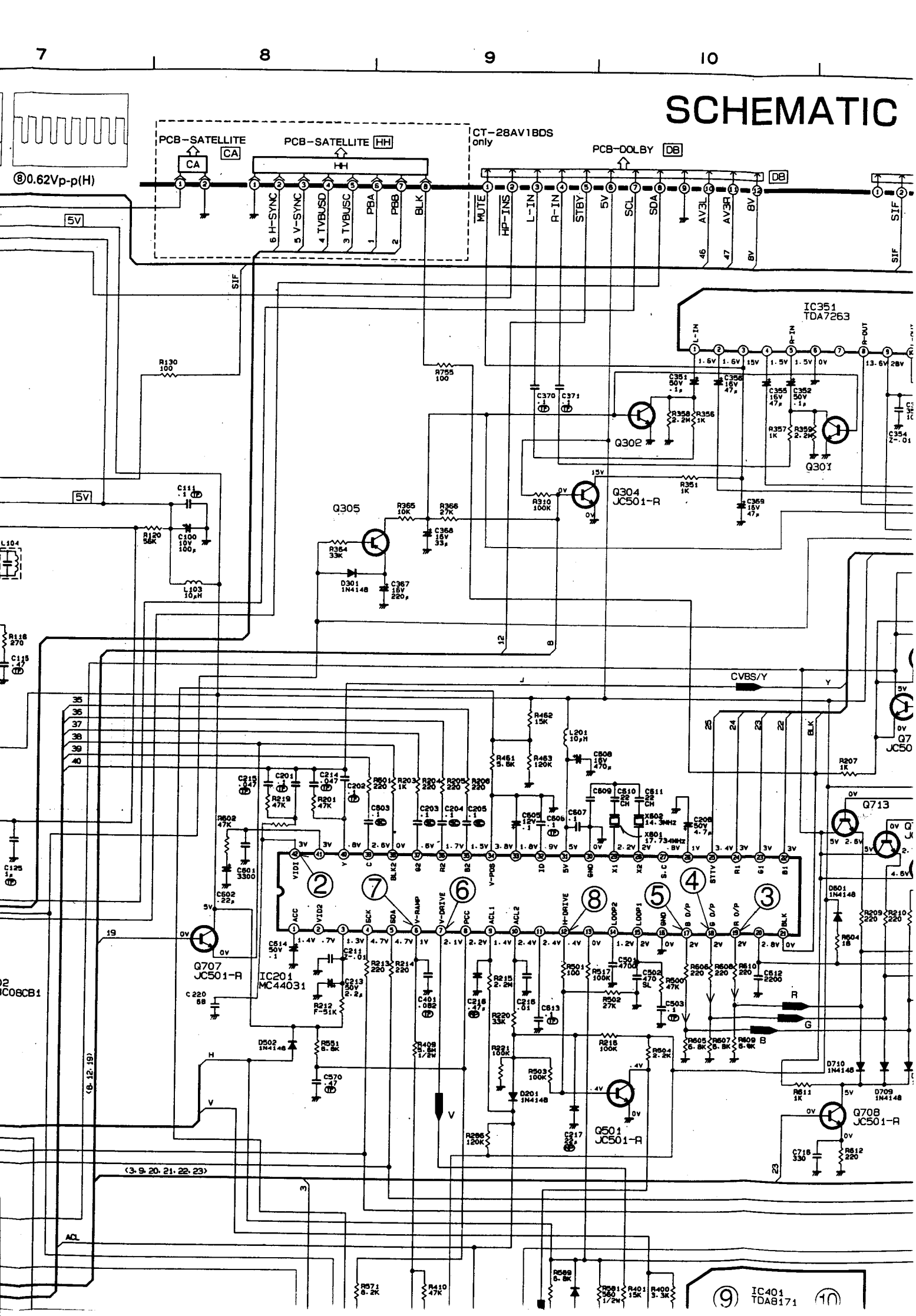
MITSUBISHI ③


1
2
3
4
A
B
C
D
E
F
①2.0Vp-p(H)
②1.0Vp-p(H)
③1.5Vp-p(H)
Q105 JA101-Q
Q107 JA101-Q
Q108 JA101-Q
Q701 2SC1740S-E
Q702 JC501-R
Q952 2SC2
Q251 JC501-R
Q252 JC501-R
Q253 JC501-R
Q256 JC501-R
Q704 JC501-R
IC202 TEA6415C
IC701
J252 AV2
J251 AV1
J253
J254
S701 SERVICE
AV1
AV2
BR
Y3

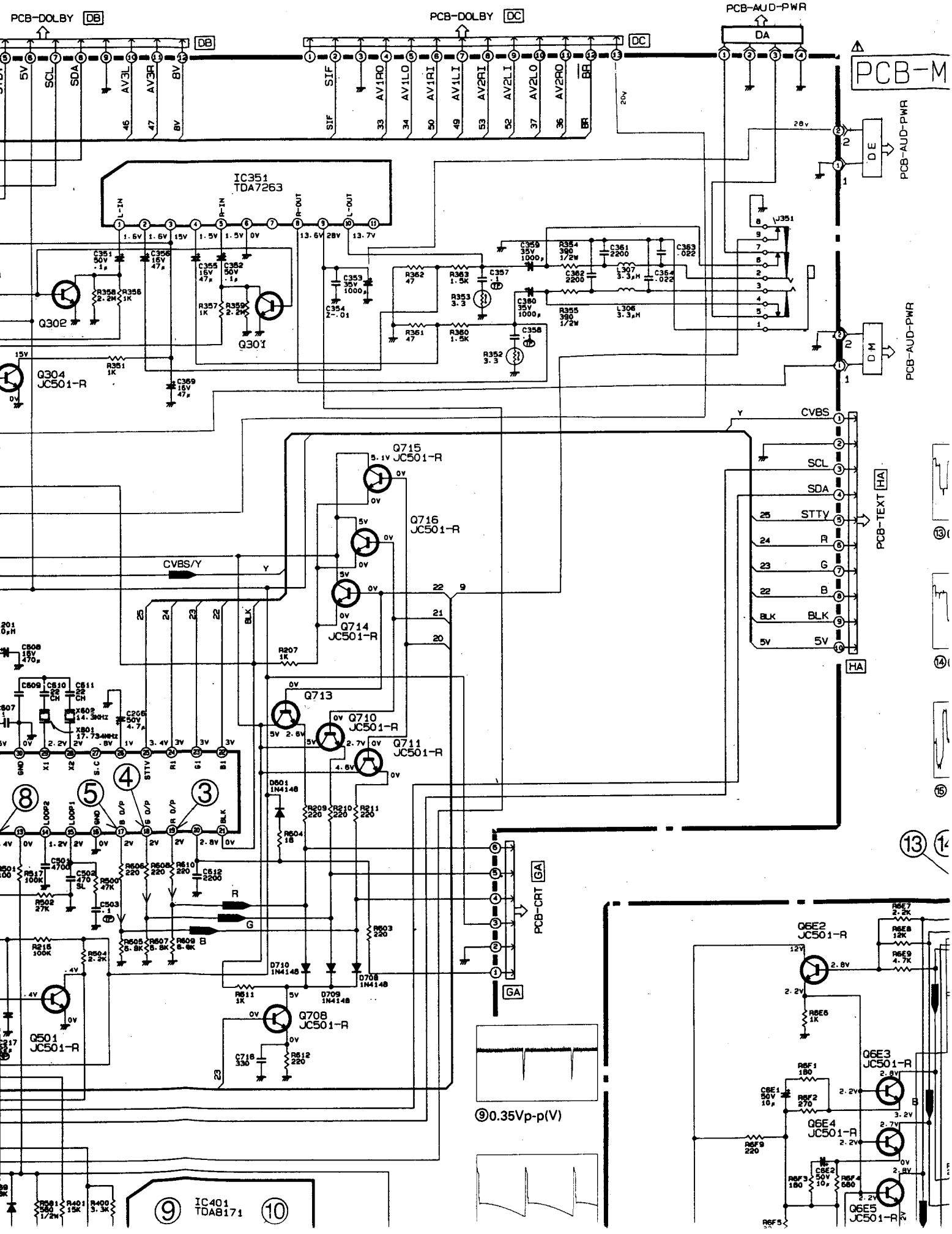

2
3
4
5
①2.0Vp-p(H)
②1.0Vp-p(H)
③1.5Vp-p(H)
④1.6Vp-p(H)
⑤
Q106 JA101-Q
Q107 JA101-Q
Q108 JA101-Q
TU101
AGC
TU
B3
B2
B1
BH
AFT
IF
J252 AV2
J251 AV1
Q701 2SC1740S-E
Q102 JC501-R
Q702 JC501-R
Q952 2SC2236 -O, Y
CVBS
Q251 JC501-R
Q252 JC501-R
Q253 JC501-R
Q256 JC501-R
IC202 TEA6415C
DET
VCC
SAT
GND
N.C
YTV
CTV
CO2
YO2
GND
AV1
SCK
SDA
C2
Y3
C3
IC701
S701
SERVICE
X701 12MHz
Q704 JC501-R
AV1
AV2
BR
Y3
C3
5V
8V


5
6
7
8
④1.6Vp-p(H)
⑤1.7Vp-p(H)
⑥1.9Vp-p(V)
⑦2.0Vp-p(V)
⑧0.62Vp-p(H)
PCB-SATELLITE
CA
6 H-SYNC
5 V-SYNC
TU101
IF
SIF
CVBS
5V
STBY5V
ACL
IC101
IC702
ST24C08CB1
IC201
MC44031
Q102
JC501-R
Q105
JC501-R
Q707
JC501-R
Q952
2SC2236
-O.Y
SF301
K9260
SF101
KZ953M
X701
12MHz
L101
L102
L103
L104
L106
L701
L702
CF101
VR101
10K
VR103
20K
SIF1
SIF2
SIFSW
GND
SIF ABC
VIF
VIP
VIPABC
TOP
RF. ABC
DET. VID
BG/L
LVL
OFFSET
AM
SIF O/P
5V
AFC
REF
AFC SW
OSC FILT
CRA
BL
IC702 ST24C08CB1
VSS
E
PRE
SDA
SCK
MODE
VDD
(6.12.19)
(3.9.20.21.22.23)

SCHEMATIC


⑧0.62Vp-p(H)
PCB-SATELLITE CA
PCB-SATELLITE HH
CT-28AV1BDS only
PCB-DOLBY DB
6 H-SYNC
5 V-SYNC
4 TVBUSD
3 TVBUSC
PBA
PBB
BLK
MUTE
HP-INS
L-IN
R-IN
STBY
5V
SCL
SDA
AV3L
AV3R
8V
SIF
IC351 TDA7263
Q302
Q301
Q304 JC501-R
Q305
D301 1N4148
CVBS/Y
IC201 MC44031
Q707 JC501-R
Q501 JC501-R
Q708 JC501-R
Q713
D501 1N4148
D502 1N4148
D201 1N4148
D710 1N4148
D709 1N4148
X501 17.734MHz
X502 14.3MHz
L201 10μH
L103 10μH
L104
R130 100
R755 100
R120 56K
R116 270
R462 15K
R461 5.6K
R463 120K
R207 1K
R602 47K
R219 47K
R201 47K
R212 5.1K
R551 6.8K
R409 5.6K 1/2W
R571 6.2K
R410 47K
R569 6.8K
R581 560 1/2W
R401 15K
R400 3.3K
R296 120K
R310 100K
R351 1K
R364 33K
R365 10K
R366 27K
R209 220
R210 220
R604 18
R605 6.8K
R607 6.8K
R609 6.8K
R606 220
R608 220
R610 220
R611 1K
R612 220
R718 330
C111 .1
C100 10V 100μ
C125
C115 .47
C215 .047
C201 .1
C214 .047
C202 .1
C203 .1
C204 .1
C205 .1
C803 .1
C601 3300
C602 .22μ
C514 50V .1
C211 .01
C213 50V 2.2μ
C220 68
C401 .082
C570 .47
C217 .22μ
C216 .47μ
C215 .01
C513 .1
C503 4700
C502 470 5%
C500 47K
C512 2200
C609 22 CH
C610 22 CH
C611 22 CH
C208 50V 4.7μ
C505 12V .1
C506 .1
C507 .1
C508 16V 470μ
C351 50V .1μ
C356 16V 47μ
C355 16V 47μ
C352 50V .1μ
C354 .01
C359 16V 47μ
C368 16V 33μ
C367 16V 220μ
C370 .1
C371 .1
R358 2.2M
R356 1K
R357 1K
R359 2.2K
R501 100
R517 100K
R502 27K
R504 2.2K
R221 100K
R503 100K
R218 100K
R220 33K
R215 2.2M
R213 220
R214 220
R408 1K
R500 47K
SIF
ACL
H
V
R
G
B
IC401 TDA8171

SCHEMATIC DIAGRAMS : CT-28AV1BD/L



28AV1BD/LD/BDS

PCB-AUD-PWR

DA

PCB-MAIN

DIFFERENCE TABLE

	BDS	LD	BD
Q106		○	
Q107		○	
Q108		○	
R102		○	
R103		○	
SF101	J3950	K3953	J3950
TU101	U1343	UV1315	UV1343

28V

DE

PCB-AUD-PWR

DM

PCB-AUD-PWR

CVBS

SCL

SDA

STTV

R

G

B

BLK

5V

PCB-TEXT HA

HA

⑬0.86Vp-p(H)

⑭0.92Vp-p(H)

⑮1.3Vp-p(H)

PCB-MAIN GA

PCB-SATELLITE GB

PCB-CRT

CT-28AV1BDS only

R G B 5V GND FDBK

Q6E2 JC501-R

Q6E3 JC501-R

Q6E4 JC501-R

Q6E5 JC501-R

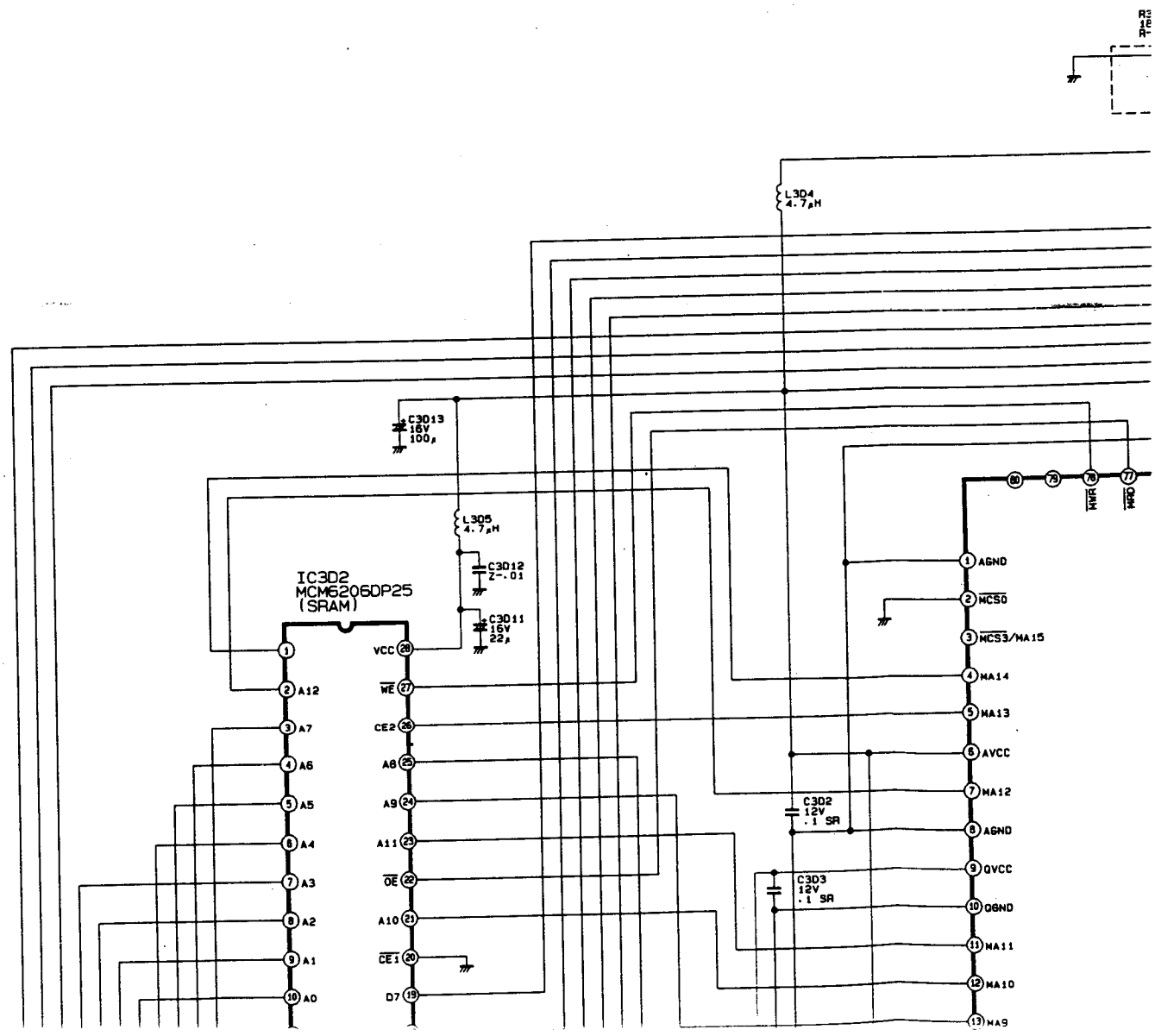
IC660 TEA5101

RIN 12V GIN BIN 200V FDBK BOUT GOUT FDBK ROUT FDBK

⑯86Vp-p(H)

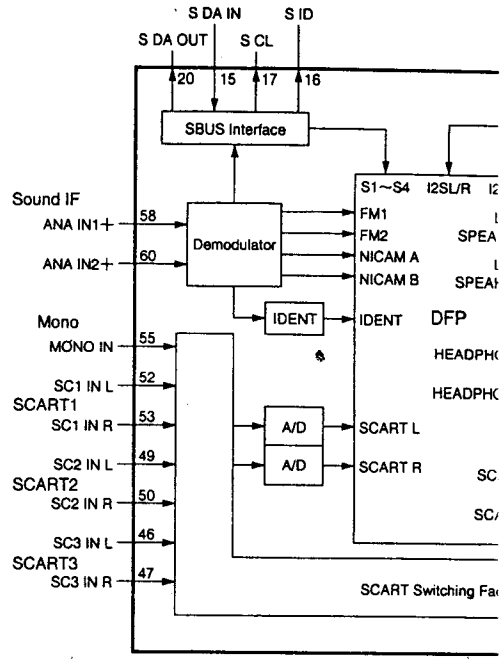
⑰87Vp-p(H)

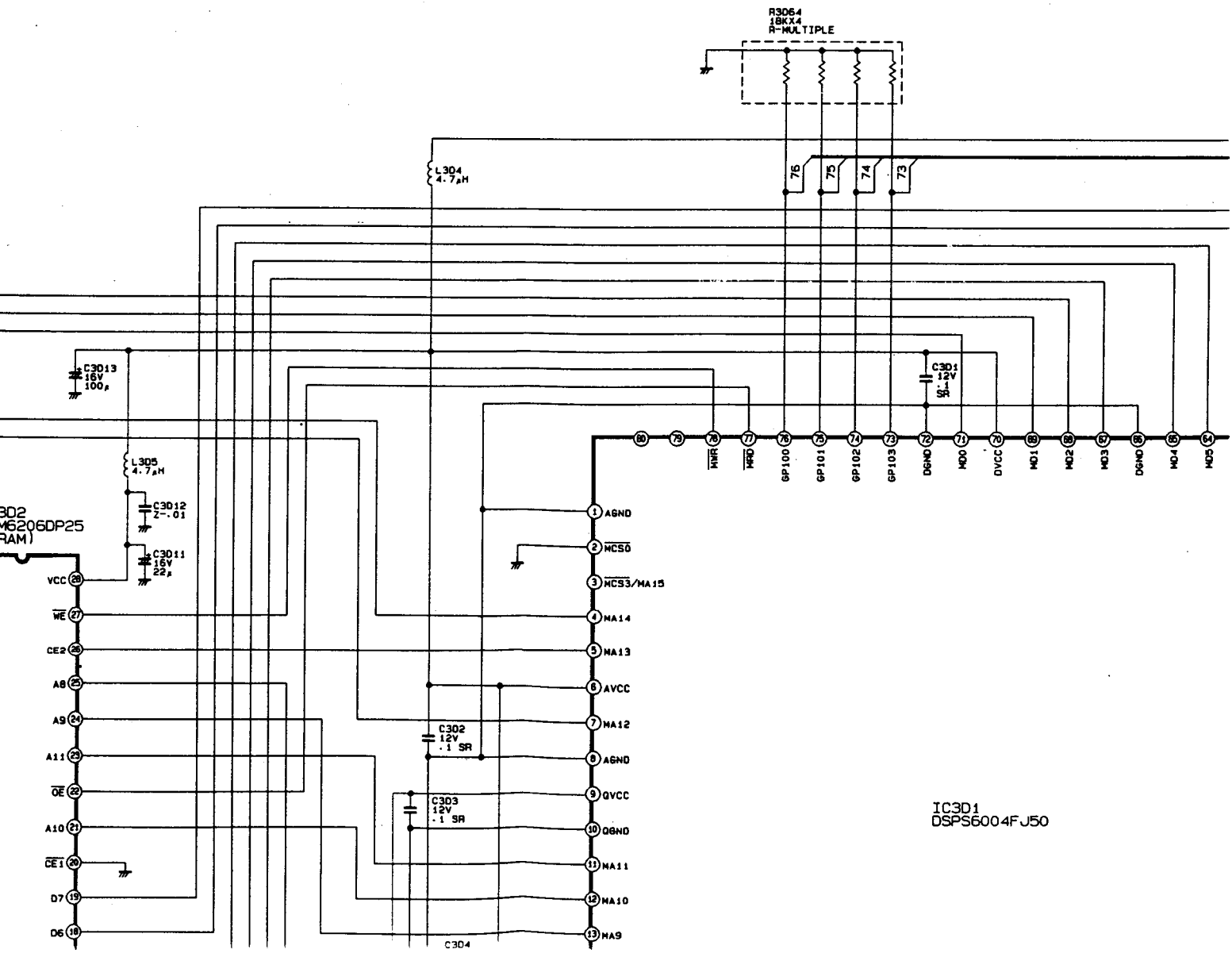
⚠ PCB-DOLBY


L3D4
4.7μH
C3D13
16V
100μ
L3D5
4.7μH
C3D12
Z-.01
C3D11
16V
22μ
IC3D2
MCM6206DP25
(SRAM)
VCC
WE
CE2
A8
A9
A11
OE
A10
CE1
D7
A12
A7
A6
A5
A4
A3
A2
A1
A0
C3D2
12V
.1 SR
C3D3
12V
.1 SR
AGND
MCS0
MCS3/MA15
MA14
MA13
AVCC
MA12
AGND
QVCC
QGND
MA11
MA10
MA9
MWR
MRD

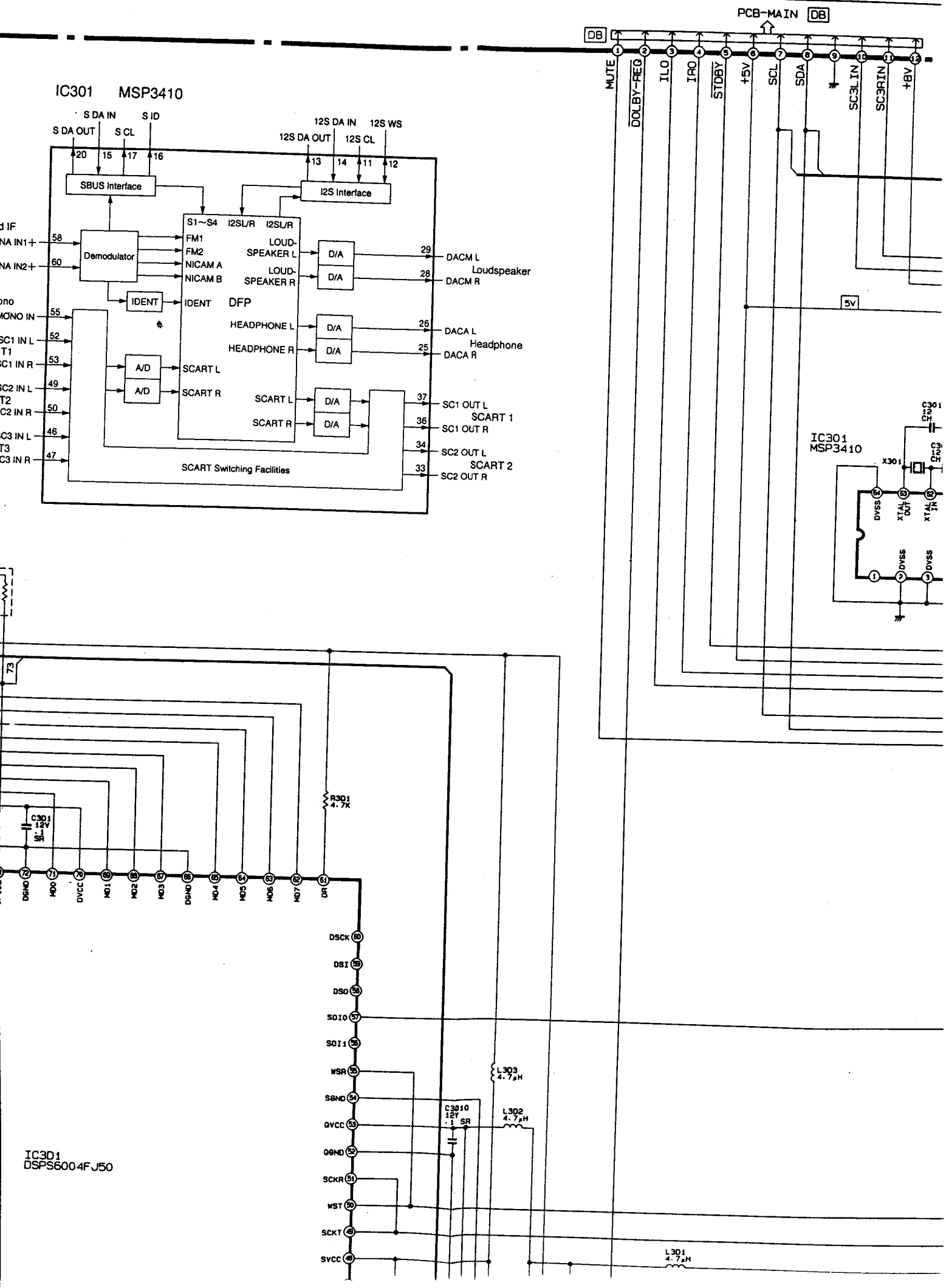
DOLBY

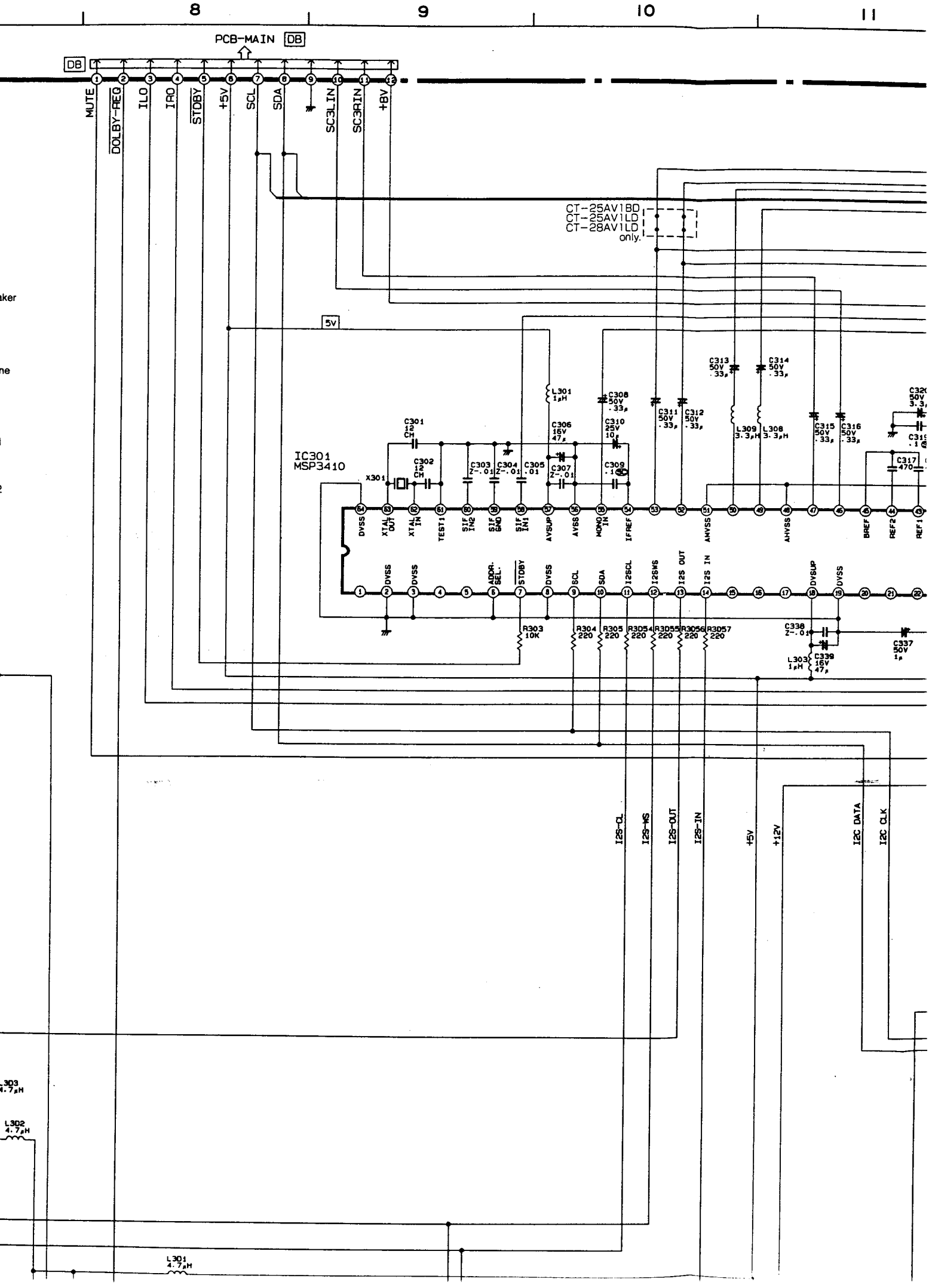
IC301 MSP3410

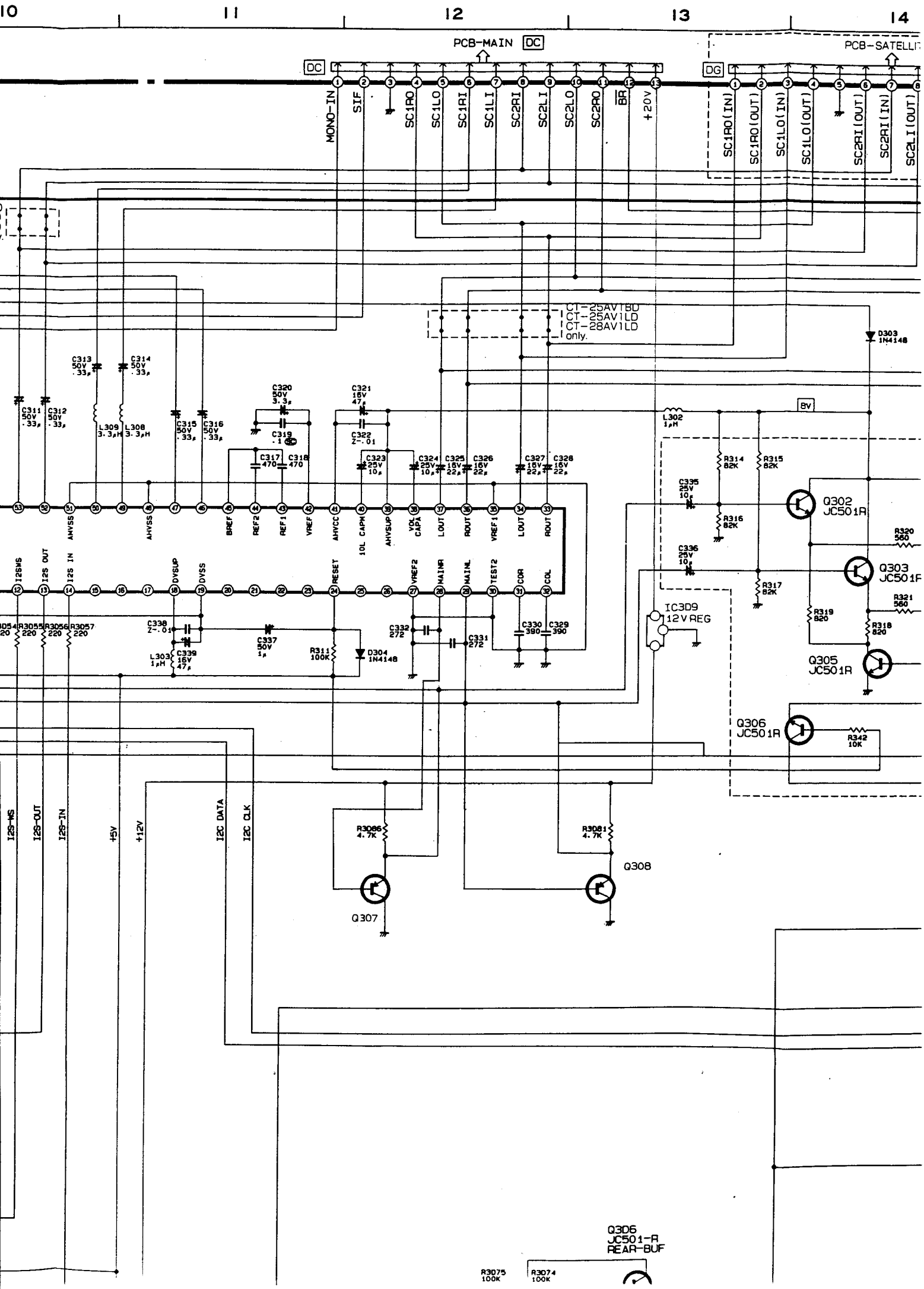


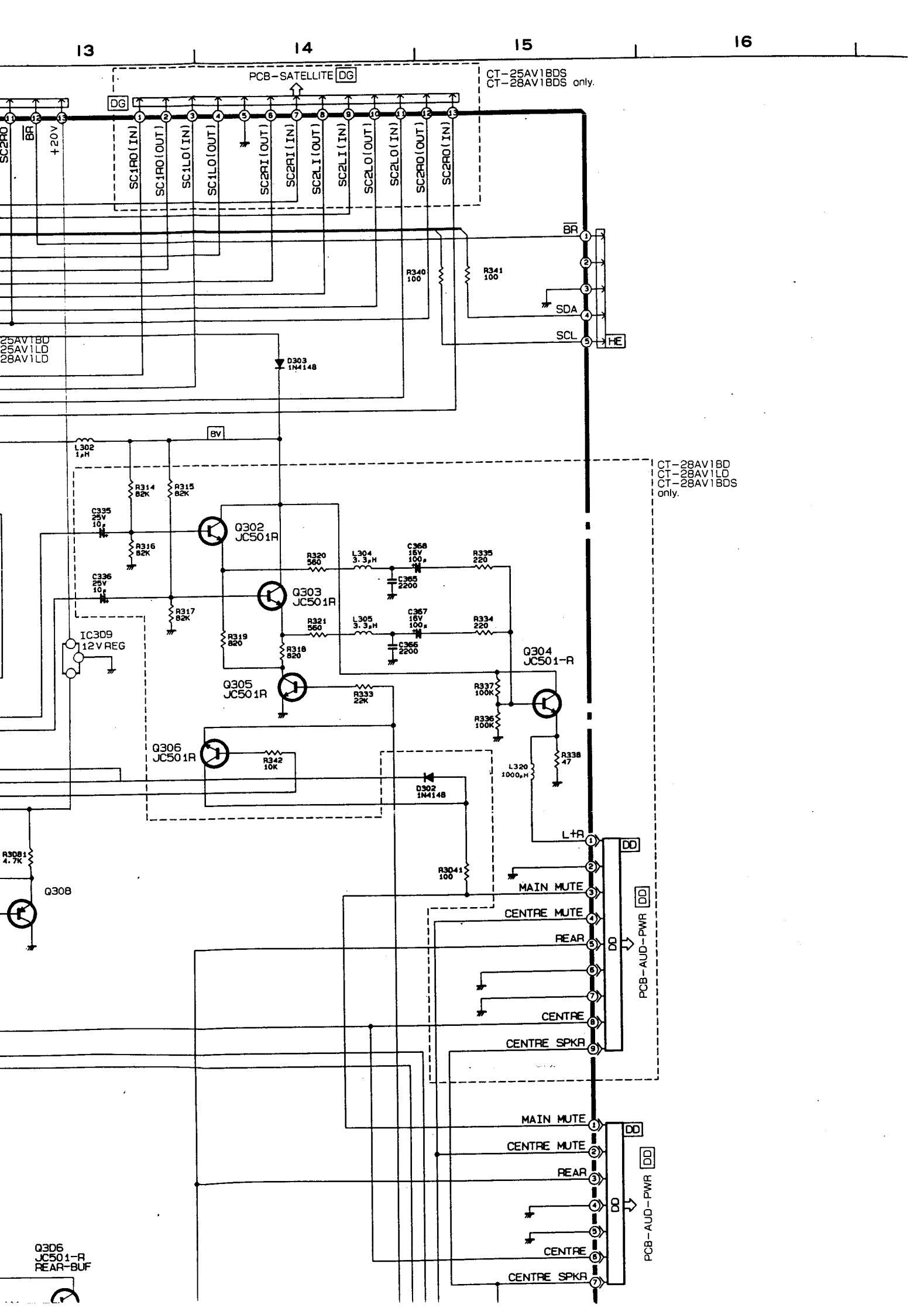


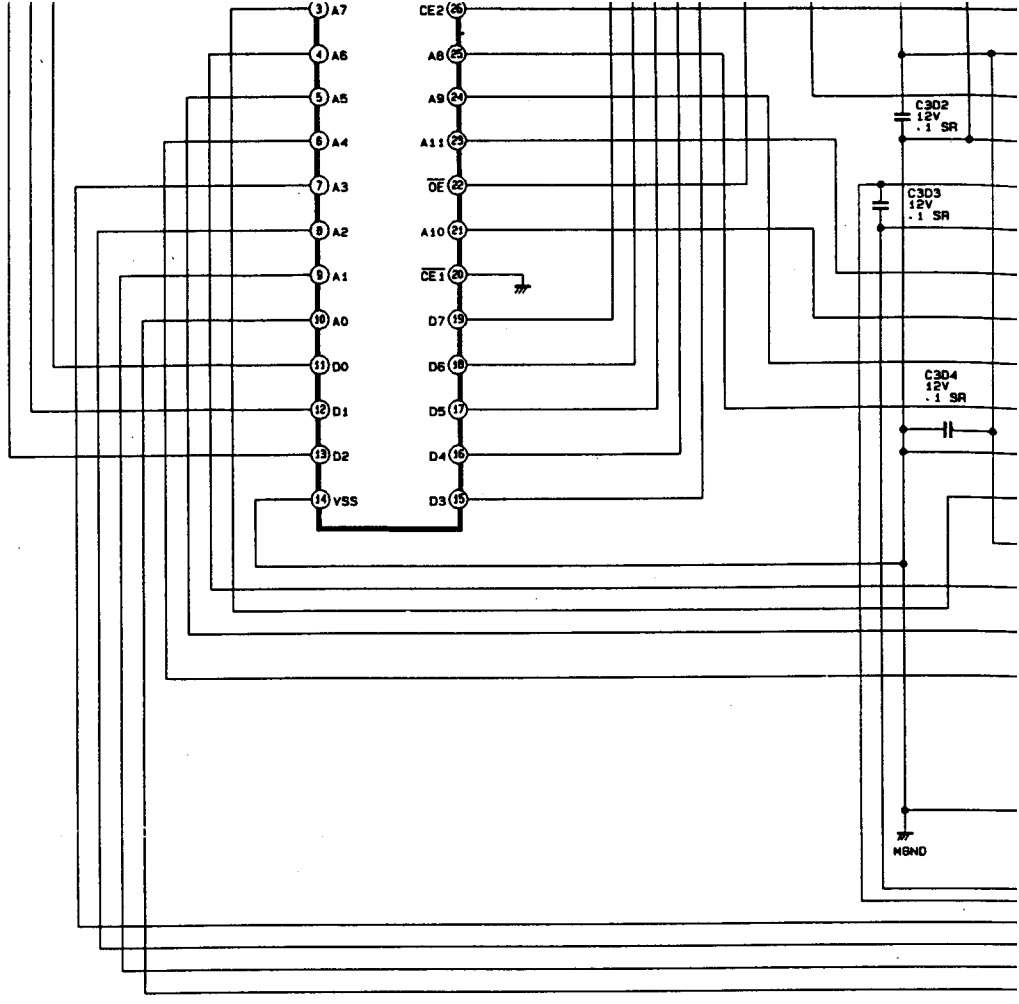
IC3D1
DSPS6004FJ50


PCB-MAIN DB
DB
MUTE
DOLBY-REG
ILO
IRO
STDBY
+5V
SCL
SDA
SC3LIN
SC3RIN
+8V
IC301 MSP3410
S DA IN
S ID
S DA OUT
S CL
12S DA IN
12S WS
12S DA OUT
12S CL
SBUS Interface
I2S Interface
Demodulator
FM1
FM2
NICAM A
NICAM B
IDENT
S1~S4
I2SL/R
I2SL/R
LOUD-SPEAKER L
LOUD-SPEAKER R
HEADPHONE L
HEADPHONE R
SCART L
SCART R
D/A
A/D
DFP
SCART Switching Facilities
DACM L
DACM R
Loudspeaker
DACA L
DACA R
Headphone
SC1 OUT L
SC1 OUT R
SCART 1
SC2 OUT L
SC2 OUT R
SCART 2
5V
X301
DVSS
XTAL OUT
XTAL IN
R301 4.7K
C301 12V
DSCK
DSI
DSO
SDIO
SDI1
WSR
SBND
QVCC
QGND
SCKR
WST
SCKT
SVCC
L303 4.7μH
L302 4.7μH
L301 4.7μH
C3010 12V .1 SR
IC3D1
DSPS6004FJ50


8
9
10
11
PCB-MAIN
DB
MUTE
DOLBY-REQ
ILO
IRO
STDBY
+5V
SCL
SDA
SC3LIN
SC3RIN
+8V
CT-25AV1BD
CT-25AV1LD
CT-28AV1LD
only.
5V
IC301
MSP3410
X301
L301 1μH
C301 12p
C302 12p
C303 Z-.01
C304 Z-.01
C305 .01
C306 16V 47μ
C307 Z-.01
C308 50V .33μ
C309 .1
C310 25V 10μ
C311 50V .33μ
C312 50V .33μ
C313 50V .33μ
C314 50V .33μ
L309 3.3μH
L308 3.3μH
C315 50V .33μ
C316 50V .33μ
C317 470
DVSS
XTAL OUT
XTAL IN
TEST1
SIF IN2
SIF GND
SIF IN1
AVSUP
AVSS
MONO IN
IFREF
AHVSS
BREF
REF2
REF1
DVSS
DVSS
ADDR. SEL.
STDBY
DVSS
SCL
SDA
I2SCL
I2SWS
I2S OUT
I2S IN
DVSUP
DVSS
R303 10K
R304 220
R305 220
R3054 220
R3055 220
R3056 220
R3057 220
C338 Z-.01
C337 50V 1μ
L303 1μH
C339 16V 47μ
I2S-CL
I2S-WS
I2S-OUT
I2S-IN
+5V
+12V
I2C DATA
I2C CLK
L303 4.7μH
L302 4.7μH
L301 4.7μH


10
11
12
13
14
PCB-MAIN
DC
PCB-SATELLI
DG
MONO-IN
SIF
SC1RO
SC1LO
SC1RI
SC1LI
SC2RI
SC2LI
SC2LO
SC2RO
BR
+20V
SC1RO(IN)
SC1RO(OUT)
SC1LO(IN)
SC1LO(OUT)
SC2RI(OUT)
SC2RI(IN)
SC2LI(OUT)
CT-25AV1BD
CT-25AV1LD
CT-28AV1LD
only.
D303
1N4148
8V
L302
1μH
C313
50V
.33μ
C314
50V
.33μ
C311
50V
.33μ
C312
50V
.33μ
L309
3.3μH
L308
3.3μH
C315
50V
.33μ
C316
50V
.33μ
C320
50V
3.3μ
C319
.1
C321
16V
47μ
C322
Z-.01
C317
470
C318
470
C323
25V
10μ
C324
25V
10μ
C325
16V
22μ
C326
16V
22μ
C327
16V
22μ
C328
16V
22μ
R314
82K
R315
82K
R316
82K
C335
25V
10μ
C336
25V
10μ
R317
82K
Q302
JC501R
R320
560
Q303
JC501R
R321
560
R319
820
R318
820
Q305
JC501R
Q306
JC501R
R342
10K
IC3D9
12V REG
AHVSS
AHVSS
BREF
REF2
REF1
VREF
AHVCC
10L CAPM
AHVSUP
VOL CAPA
LOUT
ROUT
VREF1
LOUT
ROUT
I2BWS
I2S OUT
I2S IN
DVSUP
DVSS
RESET
VREF2
MAINR
MAINL
TEST2
COR
COL
R3054
220
R3055
220
R3056
220
R3057
220
C338
Z-.01
L303
1μH
C339
16V
47μ
C337
50V
1μ
R311
100K
D304
1N4148
C332
272
C331
272
C330
390
C329
390
R3086
4.7K
R3081
4.7K
Q308
Q307
I2S-WS
I2S-OUT
I2S-IN
+5V
+12V
I2C DATA
I2C CLK
Q306
JC501-R
REAR-BUF
R3075
100K
R3074
100K


13
14
15
16
PCB-SATELLITE DG
CT-25AV1BDS
CT-28AV1BDS only.
DG
SC2RO
BR
+20V
SC1RO(IN)
SC1RO(OUT)
SC1LO(IN)
SC1LO(OUT)
SC2RI(OUT)
SC2RI(IN)
SC2LI(OUT)
SC2LI(IN)
SC2LO(OUT)
SC2LO(IN)
SC2RO(OUT)
SC2RO(IN)
R340 100
R341 100
SDA
SCL
HE
D303 1N4148
8V
L302 1μH
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS
only.
R314 82K
R315 82K
R316 82K
R317 82K
C335 25V 10μ
C336 25V 10μ
Q302 JC501R
Q303 JC501R
Q304 JC501-R
Q305 JC501R
Q306 JC501R
R320 560
R321 560
L304 3.3μH
L305 3.3μH
C368 16V 100μ
C367 16V 100μ
C365 2200
C366 2200
R335 220
R334 220
R319 820
R318 820
R333 22K
R337 100K
R336 100K
R338 47
L320 1000μH
R342 10K
D302 1N4148
IC309 12V REG
R3081 4.7K
Q308
R3041 100
L+R
MAIN MUTE
CENTRE MUTE
REAR
CENTRE
CENTRE SPKR
DD
PCB-AUD-PWR
Q306 JC501-R REAR-BUF



F

G

H

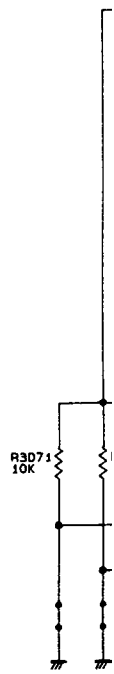
I

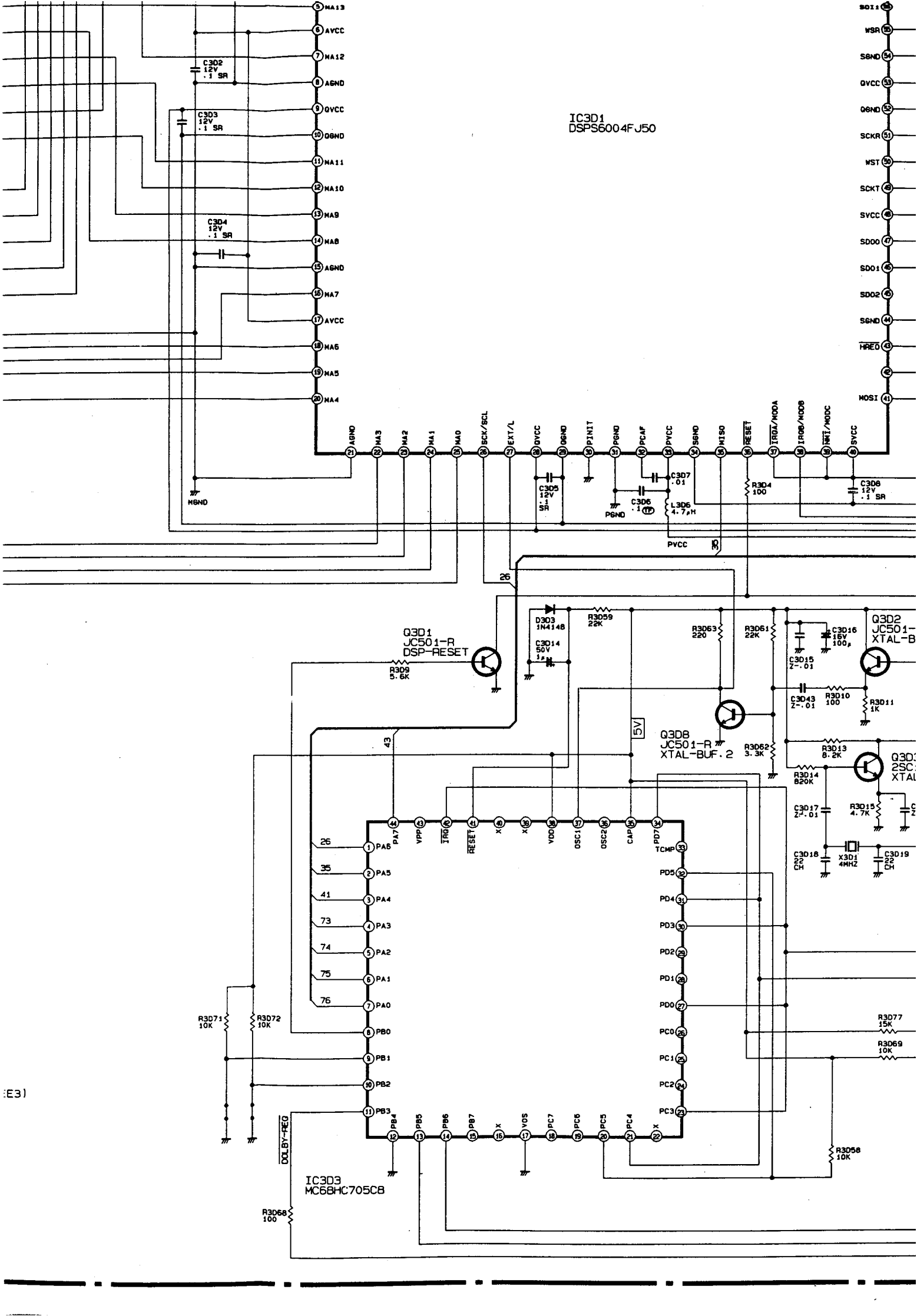
J

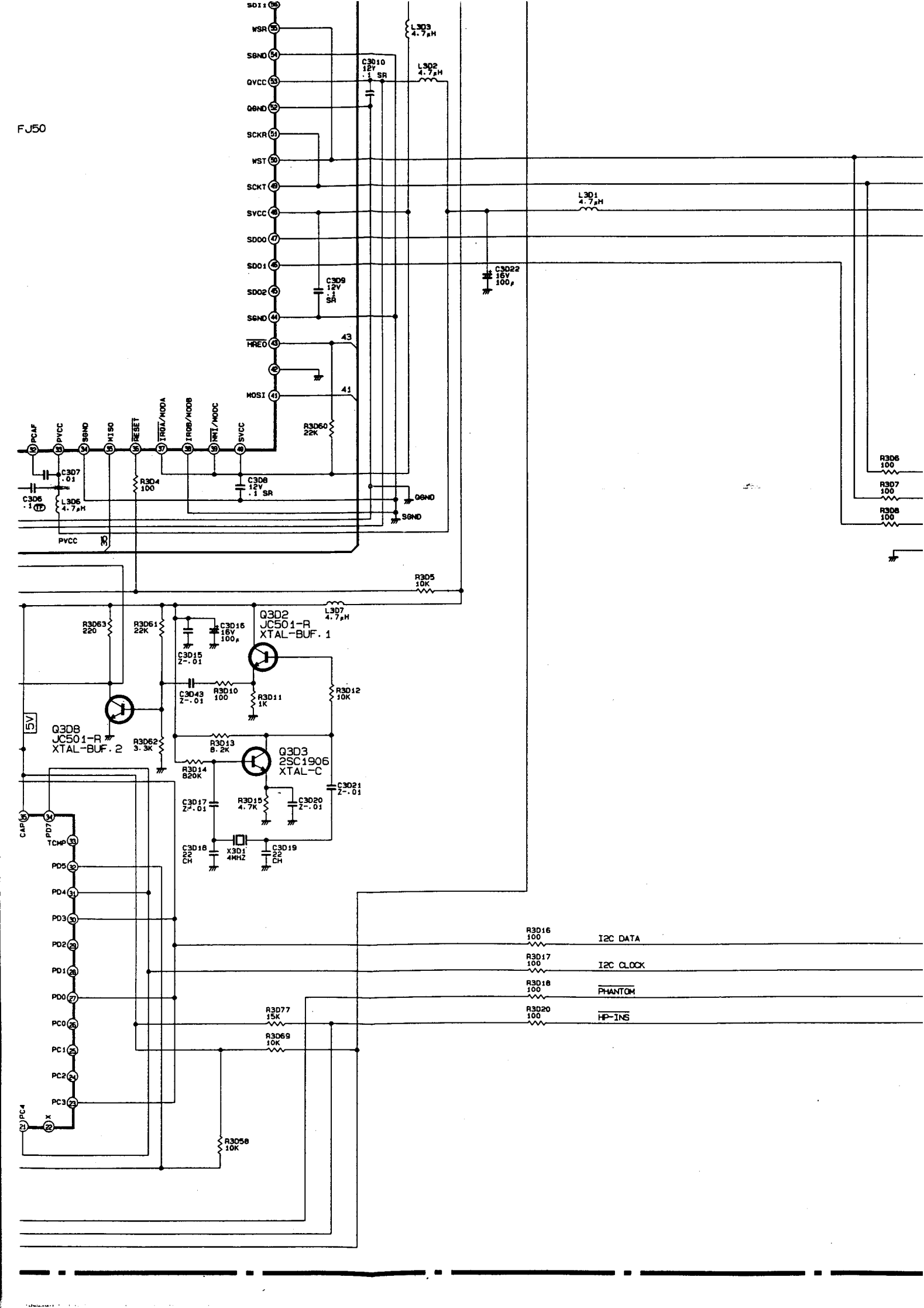
PB. 1 LOW = BASS LIFT DISABLED
HIGH = BASS LIFT GNABLED

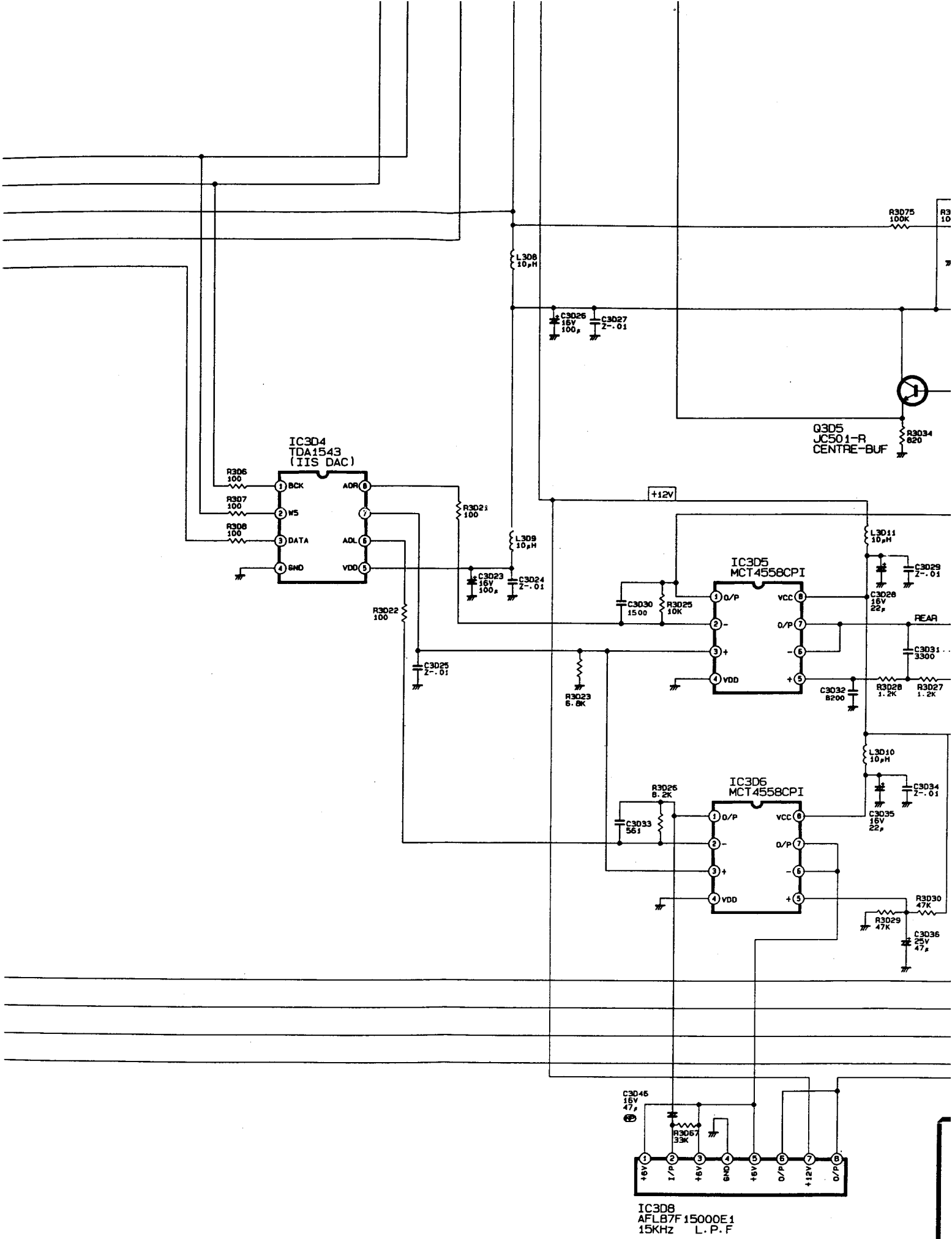
PB. 2 LOW = CO. EFF. 1 USED
HIGH = CO. EFF. 2 USED

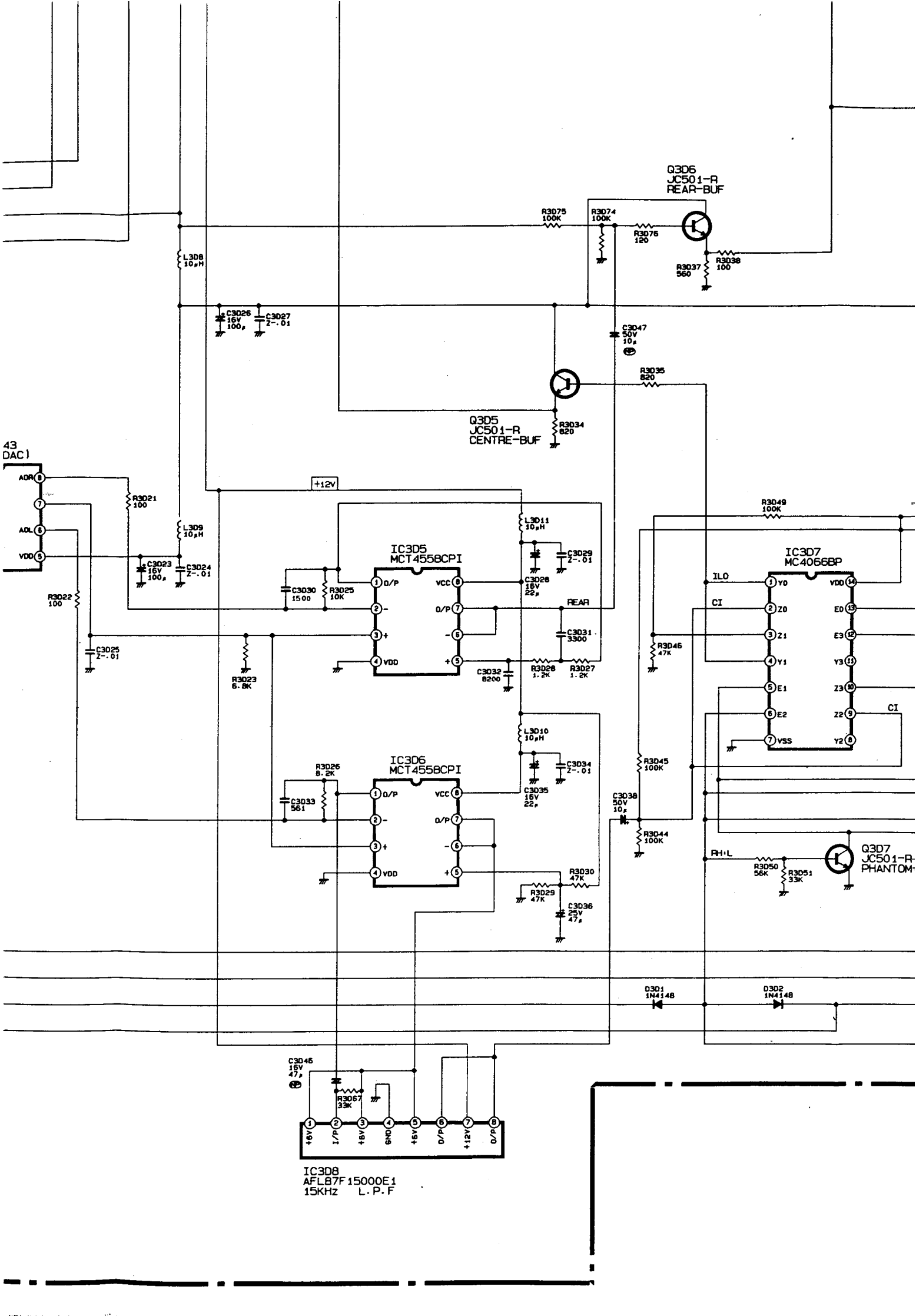
PB. 7 = $\overline{\text{DOLBY. 3}}$ (NOT USED ON EE3)
PB. 6 = $\overline{\text{PHANTOM}}$ -OUTPUT
PB. 5 = $\overline{\text{H. P INS}}$ -OUTPUT

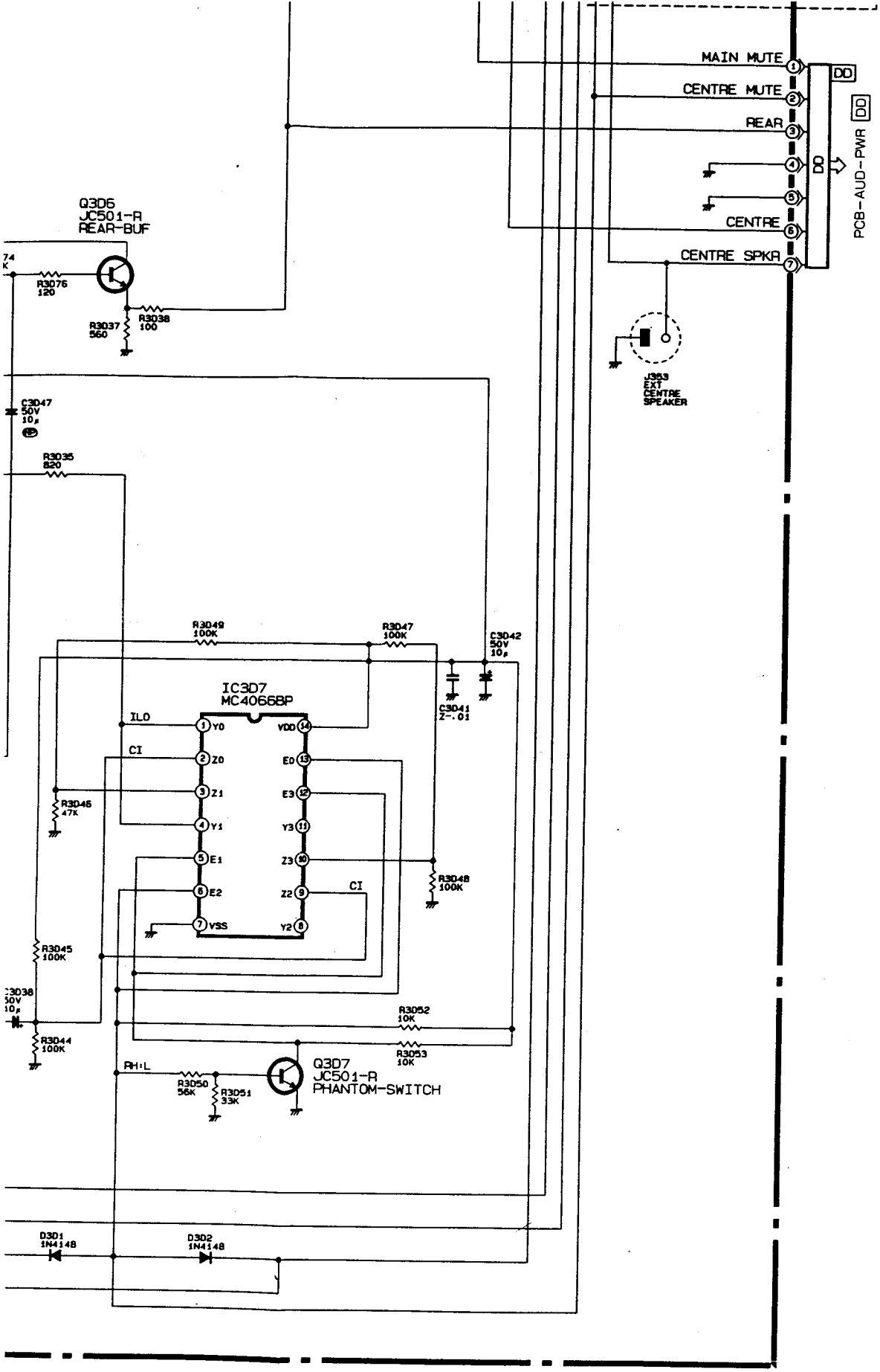



IC3D1
DSPS6004FJ50
C3D2 12V .1 SR
C3D3 12V .1 SR
C3D4 12V .1 SR
C3D5 12V .1 SR
C3D6 .1
C3D7 .01
C3D8 12V .1 SR
L3D6 4.7μH
R3D4 100
MA13
AVCC
MA12
AGND
DVCC
DGND
MA11
MA10
MA9
MA8
AGND
MA7
AVCC
MA6
MA5
MA4
MGND
PGND
PVCC
SDOI
WSR
SGND
DVCC
DGND
SCKR
WST
SCKT
SVCC
SDO0
SDO1
SDO2
SGND
MREQ
MOSI
AGND MA3 MA2 MA1 MA0 SCK/SCL EXT/L DVCC DGND PINIT PGND PCAP PVCC SGND MISO RESET IRQA/MODA IRQB/MODB WAIT/MODC SVCC
Q3D1
JC501-R
DSP-RESET
R3D9 5.6K
D3D3 1N4148
C3D14 50V
R3D59 22K
R3D63 220
R3D61 22K
C3D16 16V 100μ
C3D15 .01
C3D43 .01
R3D10 100
R3D11 1K
Q3D2
JC501-
XTAL-B
Q3D8
JC501-R
XTAL-BUF.2
R3D62 3.3K
R3D13 8.2K
R3D14 820K
C3D17 .01
R3D15 4.7K
C3D18 22 CH
X3D1 4MHZ
C3D19 22 CH
5V
26
43
PA7 VPP IRQ RESET X X VDD OSC1 OSC2 CAP PD7
PA5 PA5 PA4 PA3 PA2 PA1 PA0 PB0 PB1 PB2 PB3
TCMP PD5 PD4 PD3 PD2 PD1 PD0 PC0 PC1 PC2 PC3
PB4 PB5 PB6 PB7 X VOS PC7 PC6 PC5 PC4 X
R3D71 10K
R3D72 10K
R3D77 15K
R3D69 10K
R3D58 10K
DOLBY-REG
IC3D3
MC68HC705C8
R3D68 100


FJ50
SDI1
WSR
SGND
QVCC
QGND
SCKR
WST
SCKT
SVCC
SDO0
SDO1
SDO2
SGND
HREQ
MOSI
L3D3 4.7µH
L3D2 4.7µH
L3D1 4.7µH
C3D10 12V .1 SR
C3D9 12V .1 SR
C3D22 16V 100µ
R3D60 22K
R3D6 100
R3D7 100
R3D8 100
PCAP
PVCC
SGND
MISO
RESET
IRQA/MODA
IRQB/MODB
HRI/MODC
SVCC
C3D7 .01
C3D6 .1
L3D6 4.7µH
R3D4 100
C3D8 12V .1 SR
QGND
SGND
PVCC
R3D5 10K
L3D7 4.7µH
R3D63 220
R3D61 22K
C3D16 16V 100µ
C3D15 Z-.01
Q3D2 JC501-R XTAL-BUF. 1
C3D43 Z-.01
R3D10 100
R3D11 1K
R3D12 10K
5V
Q3D8 JC501-R XTAL-BUF. 2
R3D62 3.3K
R3D13 8.2K
R3D14 820K
Q3D3 2SC1906 XTAL-C
C3D21 Z-.01
C3D17 Z-.01
R3D15 4.7K
C3D20 Z-.01
C3D18 22 CH
X3D1 4MHZ
C3D19 22 CH
CAP
PD7
TCMP
PD5
PD4
PD3
PD2
PD1
PD0
PC0
PC1
PC2
PC3
PC4
R3D58 10K
R3D16 100
I2C DATA
R3D17 100
I2C CLOCK
R3D18 100
PHANTOM
R3D20 100
HP-INS
R3D77 15K
R3D69 10K


R3075
100K
L308
10μH
C3026
16V
100μ
C3027
Z-.01
Q3D5
JC501-R
CENTRE-BUF
R3034
820
IC3D4
TDA1543
(IIS DAC)
R306
100
R307
100
R308
100
BCK
WS
DATA
GND
ADR
ADL
VDD
R3021
100
L309
10μH
C3023
16V
100μ
C3024
Z-.01
R3022
100
C3025
Z-.01
+12V
L3011
10μH
IC3D5
MCT4558CPI
C3030
1500
R3025
10K
O/P
VCC
O/P
VDD
C3028
16V
22μ
C3029
Z-.01
REAR
C3031
3300
C3032
8200
R3028
1.2K
R3027
1.2K
R3023
6.8K
L3010
10μH
IC3D6
MCT4558CPI
R3026
8.2K
C3033
561
C3035
16V
22μ
C3034
Z-.01
R3030
47K
R3029
47K
C3036
25V
47μ
C3045
16V
47μ
R3067
33K
+8V
I/P
+8V
GND
+8V
O/P
+12V
O/P
IC3D8
AFL87F15000E1
15KHz L.P.F


Q3D6
JC501-R
REAR-BUF
R3D75
100K
R3D74
100K
R3D76
120
R3D37
560
R3D38
100
L3D8
10μH
C3D26
16V
100μ
C3D27
Z-.01
C3D47
50V
10μ
R3D35
820
Q3D5
JC501-R
CENTRE-BUF
R3D34
820
43
DAC)
ADR
ADL
VDD
R3D21
100
L3D9
10μH
C3D23
16V
100μ
C3D24
Z-.01
R3D22
100
C3D25
Z-.01
+12V
L3D11
10μH
C3D29
Z-.01
IC3D5
MCT4558CPI
C3D30
1500
R3D25
10K
C3D28
16V
22μ
REAR
C3D31
3300
C3D32
8200
R3D28
1.2K
R3D27
1.2K
R3D23
6.8K
R3D49
100K
IC3D7
MC4066BP
ILO
CI
R3D46
47K
L3D10
10μH
C3D34
Z-.01
IC3D6
MCT4558CPI
R3D26
8.2K
C3D33
561
C3D35
16V
22μ
R3D45
100K
C3D38
50V
10μ
R3D44
100K
R3D30
47K
R3D29
47K
C3D36
25V
47μ
RH:L
R3D50
56K
R3D51
33K
Q3D7
JC501-R
PHANTOM
D3D1
1N4148
D3D2
1N4148
C3D46
16V
47μ
R3D67
33K
+8V
I/P
+8V
GND
+5V
O/P
+12V
O/P
IC3D8
AFL87F15000E1
15KHz L.P.F



CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS

MITSUBISHI